QUELLE 011.175

MODEL

SERVICE MANUAL

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TECHNICAL DATA	TECHNISCHE DATEN	
Mains power	Netzanschluss	187-260V, 50 Hz
Power consumption (norm.)	Leistungsaufnahme (Norm.)	90 W
Picture tube	Bildröhre	28"/71 cm 110° 25"/63 cm 110° 21"/55 cm 110°
Programme memory locations	Vorwählbare Kanäle	48
With the SA501	Mit SA501	87
AV memory locations	AV-Speicherplätze	4
Sound output	Ton-Endstufe	2 x 20 W / 4 Ω (music)
Chassis	Ausstattung	
Mains isolated	Netzisolerd	
Digital controlled	Digitalkontrolliert	
Connections	Anschlüsse	
On the front panel	Auf der Frontplatte	
Headphones	Kopfhöreranschluß	8 - 600 Ω; 6,3 mm
S-VHS Mini-Din (in)	S-VHS Mini-Din (Eingang)	*
2xRCA Audio (in)	2xRCA Audio (Eingang)	*
RCA Video (in)	RCA Video (Eingang)	*
On the rear panel	Auf der Rückwand	
Audio/video (SCART1)	Audio/video (SCART1)	Audio out: 0,5 V/1 kΩ Audio in: 0,5 V/10 kΩ Video out: 1 V/75 Ω Video in: 1 V/75 Ω Y/C in (SVHS)
Audio/video (SCART2)	Audio/video (SCART2)	Audio out: 0,5 V/1 kΩ Audio in: 0,5 V/10 kΩ RGB in: 0,7 V/75Ω Video out: 1 V/75 Ω Video in: 1 V/75 Ω
Loudspeakers	Zusatzlautsprecher	min. 20 W / 4 Ω
Aerial	Antenneneingang	75Ω
Specifications subject to change	Änderungen vorbehalten	

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TEKNISKA DATA	TEKNISET TIEDOT	
Nätanslutning	Verkkoliitäntä	187-260V, 50 Hz
Effektförbrukning	Tehontarve	
Normalt bild/ljud	Normaali kuva/ääni	90 W
Bildrör	Kuvaputki	28"/71 cm 110° 25"/63 cm 110° 21"/55 cm 110°
Antal programminnen	Ohjelmamuistipaikkoja	48
Med SA501	SA501 asennettuna	87
Antal AV minnen	AV-muistipaikkoja	4
Ljudeffekt	Ääniteho	2 x 20 W / 4 Ω (music)
Chassi	Kojeisto	
Nätisolerad	Verkkoeristetty	
Digitalstyrd	Digitaaliohjattu	
Anslutningar	Liitännät	
På framsidan	Etupaneeli	
Anslutning för hörlurar	Kuulokkeet	8 - 600 Ω; 6,3 mm
S-VHS Mini-Din IN	S-VHS Mini-Din (tulo)	*
2xRCA Audio IN	2xRCA Audio (tulo)	*
RCA Video IN	RCA Video (tulo)	*
På baksidan	Takapaneeli	
Audio/video (SCART1)	Audio/video (SCART1)	Audio out: 0,5 V/1 kΩ Audio in: 0,5 V/10 kΩ Video out: 1 V/75 Ω Video in: 1 V/75 Ω Y/C in (SVHS)
Audio/video (SCART2)	Audio/video (SCART2)	Audio out: 0,5 V/1 kΩ Audio in: 0,5 V/10 kΩ RGB in: 0,7 V/75Ω Video out: 1 V/75 Ω Video in: 1 V/75 Ω
Extra högtalaranslutning	Kaiuttimet	min. 20 W / 4 Ω
Antennanslutning	Antenni	75Ω
Förbehåll för ändringar	Oikeudet muutoksiin pidätetään	

TV CHANNELS

48 different TV channels described on the tables 1, 2, 3 and 4 can be stored in the receiver's memory locations 1 ... 48.

Into the receiver's memory there have been preprogrammed 4 different channel tables: Table 1 consists of most European TV channels, Table 2 consists of East-European channels, Table 3 consists of French channels and on Table 4 frequencies are with 4 MHz raster. A new channel table is selected in tuning mode by entering the first channel number of the desired channel table:

1. Press the PRG button.
2. Select the tuning mode by pressing the red button.
3. Enter the desired channel number.
   E.g. Channel table 3 is selected by entering channel number 305 with the number buttons.
4. Start the channel search by pressing the red button etc.

The selected channel table stays active until a new will be selected.

CHANNEL TABLE 1

CCIR CHANNELS

Channel	Nº	Band	MHz
E2	002	VHF I	48,25
E3	003	VHF I	55,25
E4	004	VHF I	62,25
E5	005	VHF III	175,25
...			
E12	012	VHF III	224,25
21	021	UHF	471,25
...			
69	069	UHF	885,25

ITALIAN CHANNELS

Channel	Nº	Band	MHz
A	013	VHF I	53,75
B	014	VHF I	62,25
C	015	VHF I	82,25
D	016	VHF III	175,25
E	017	VHF III	183,75
F	018	VHF III	192,25
G	019	VHF III	201,25
H	020	VHF III	210,25

S-CHANNELS (CABLE)

Channel	Nº	Band	MHz
S1	101	VHF I	105,25
S2	102	VHF III	112,25
S3	103	VHF III	119,25
S4	104	VHF III	126,25
S5	105	VHF III	133,25
S6	106	VHF III	140,25
S7	107	VHF III	147,25
S8	108	VHF III	154,25
S9	109	VHF III	161,25
S10	110	VHF III	168,25
S11	111	VHF III	231,25
S12	112	VHF III	238,25
S13	113	VHF III	245,25
S14	114	VHF III	252,25
S15	115	VHF III	259,25
S16	116	VHF III	266,25
S17	117	VHF III	273,25
S18	118	VHF III	280,25
S19	119	VHF III	287,25
S20	120	VHF III	294,25
S21	121	HYPER	303,25
S22	122	HYPER	311,25
S23	123	HYPER	319,25
S24	124	HYPER	327,25
S25	125	HYPER	335,25
S26	126	HYPER	343,25
S27	127	HYPER	351,25
S28	128	HYPER	359,25
S29	129	HYPER	367,25
S30	130	HYPER	375,25
S30	130	HYPER	375,25
S31	131	HYPER	383,25
S32	132	HYPER	391,25
S33	133	HYPER	399,25
S34	134	HYPER	407,25
S35	135	HYPER	415,25
S36	136	HYPER	423,25
S37	137	HYPER	431,25
S38	138	HYPER	439,25
S39	139	HYPER	447,25
S40	140	HYPER	455,25
S41	141	HYPER	463,25
S'1	151	VHF I	69,25
S'2	152	VHF I	76,25
S'3	153	VHF I	83,25
S'4	154	VHF I	90,25
S'5	155	VHF I	97,25

IRISH CHANNELS

Channel	Nº	Band	MHz
IA	070	VHF I	45,75
IB	071	VHF I	53,75
IC	072	VHF I	61,75
ID	073	VHF III	175,25
IE	074	VHF III	183,25
IF	075	VHF III	191,25
IG	076	VHF III	199,25
IH	077	VHF III	207,25
II	078	VHF III	215,25
IJ	079	VHF III	223,25

CHANNEL TABLE 2

EAST-EUROPEAN CHANNELS

Channel	Nº	Band	MHz
R I	201	VHF I	49,75
R2	202	VHF I	59,25
R3	203	VHF I	77,25
R4	204	VHF I	85,25
R 5	205	VHF I	93,25
R 6	206	VHF III	175,25
R7	207	VHF III	183,25
R8	208	VHF III	191,25
R9	209	VHF III	199,25
R10	210	VHF III	207,25
R11	211	VHF III	215,25
R12	212	VHF III	223,25

CHANNEL TABLE 3

FRENCH CHANNELS

Channel	Nº	Band	MHz
05	305	VHF III	176,00
06	306	VHF III	184,00
07	307	VHF III	192,00
08	308	VHF III	200,00
09	309	VHF III	208,00
10	310	VHF III	216,00

CABLE CHANNELS

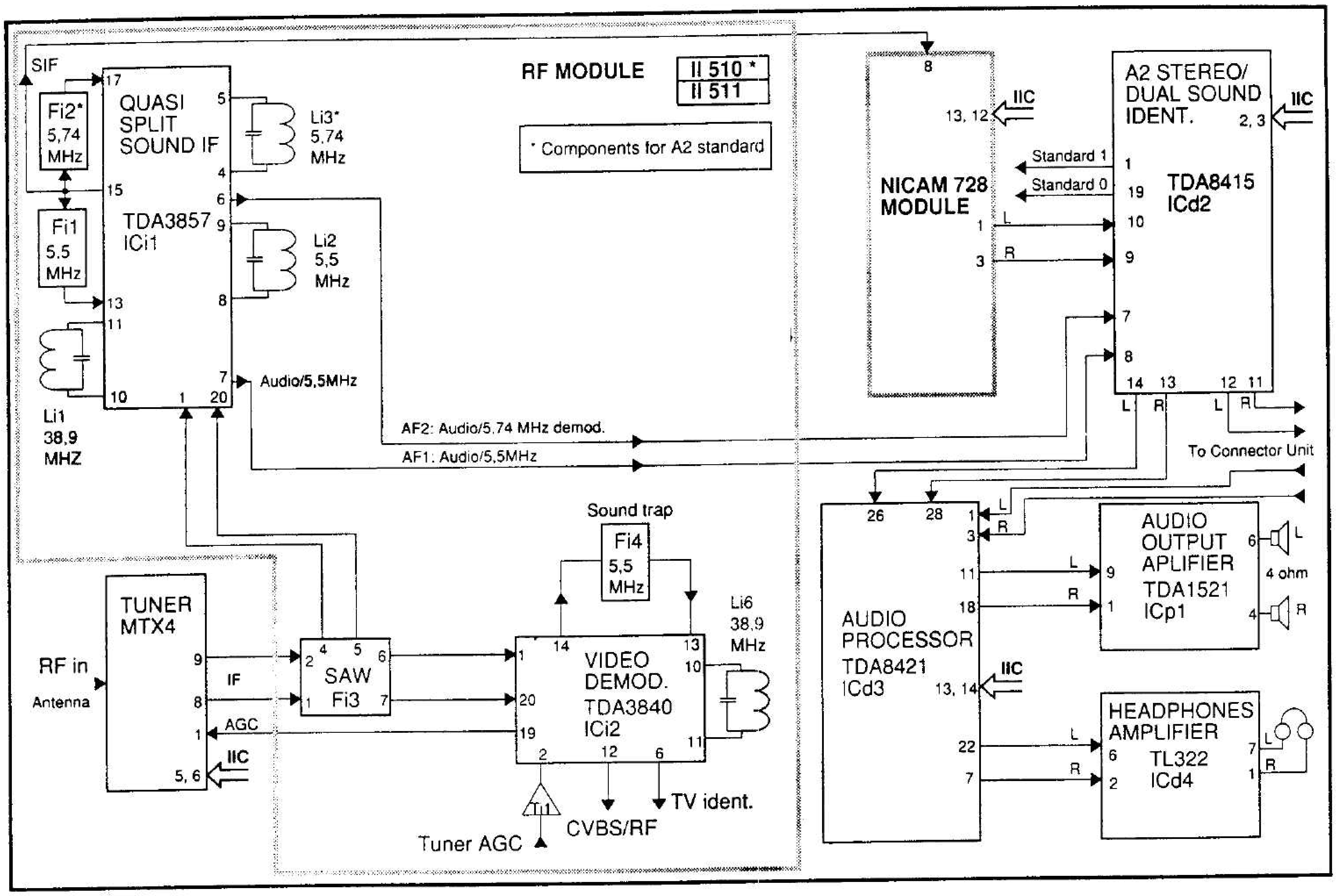
Channel	Nº	Band	MHz
Fc80	380	VHF III	116,75
Fc81	381	VHF III	128,75
...			
Fc95	395	VHF III	296,75

CHANNEL TABLE 4

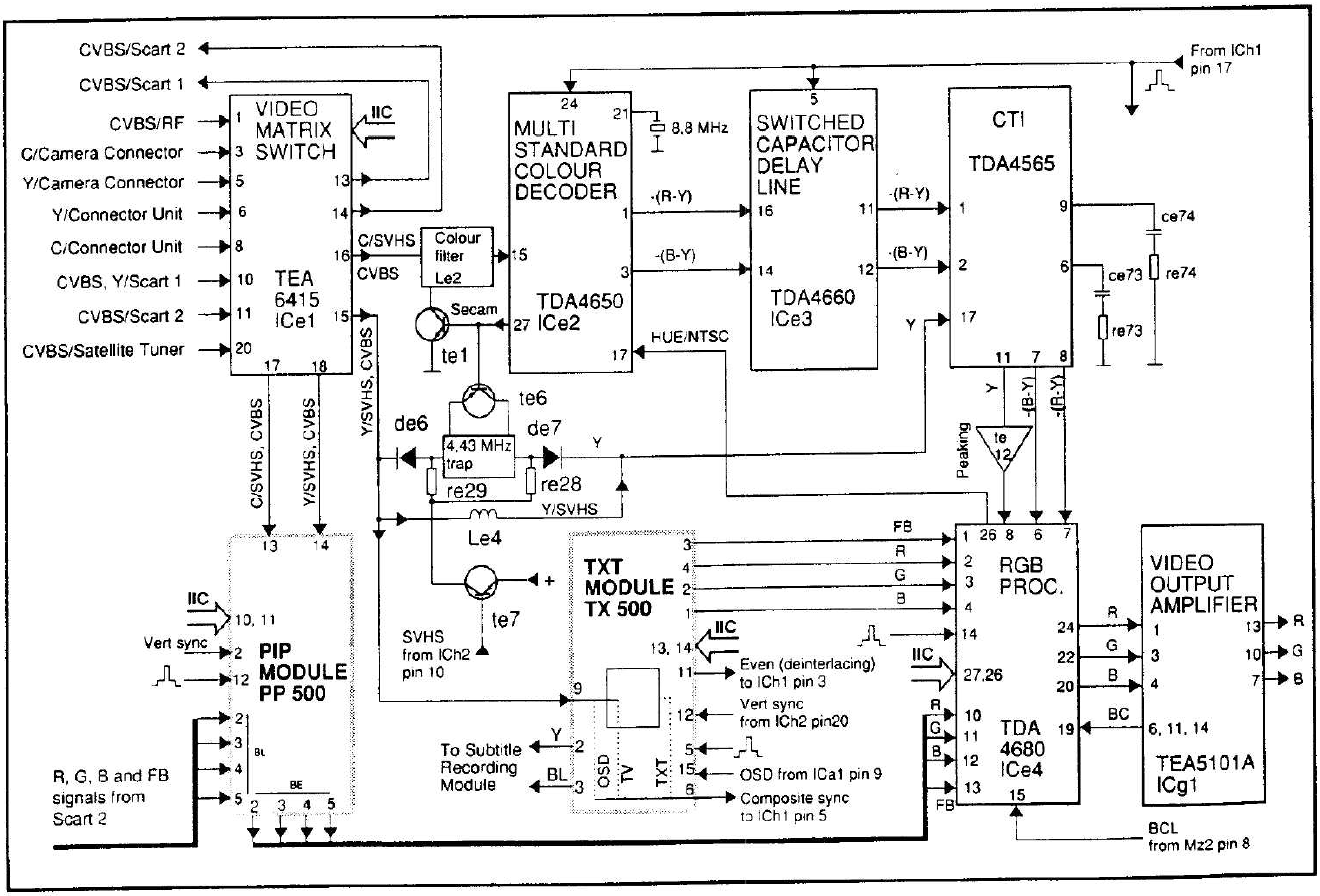
FREQ. WITH 4 MHz RASTER

Channel	Nº	Band	MHz
F044	401	VHF I	44,25
F048	402	VHF I	48,25
F052	403	VHF I	52,25
F056	404	VHF I	56,25
...			
F112	418	VHF III	112,25
F116	419	VHF III	116,25
F120	420	VHF III	120,25
...			
F304	466	HYPER	304,25
F308	467	HYPER	308,25
F312	468	HYPER	312,25
...			
F436	499	HYPER	436,25

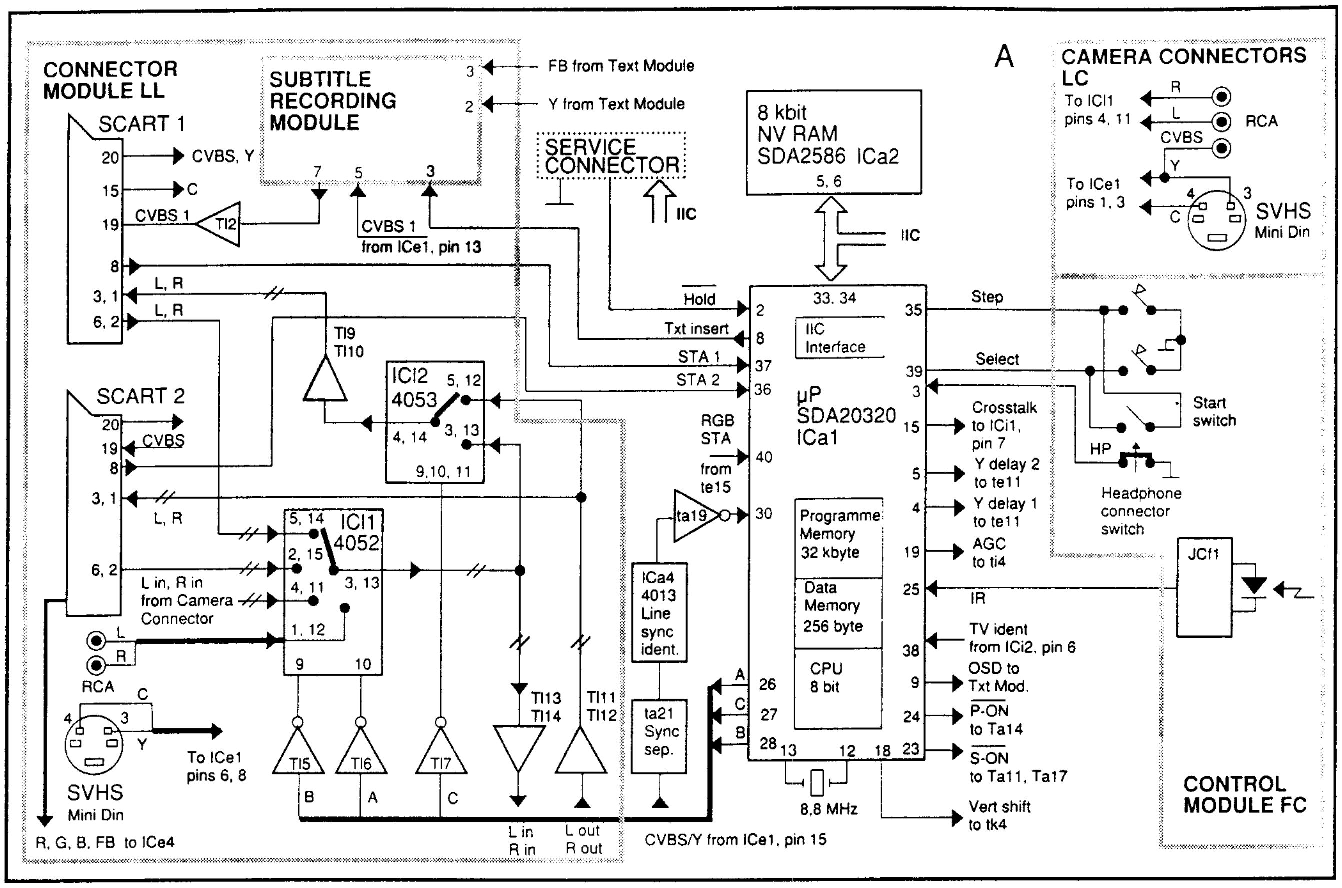
RF AND SOUND CIRCUIT BLOCK DIAGRAM


RF MODULE
II 510 *
II 511
* Components for A2 standard
SIF
Fi2* 5,74 MHz
Fi1 5,5 MHz
QUASI SPLIT SOUND IF
TDA3857 ICi1
Li3* 5,74 MHz
Li2 5,5 MHz
Li1 38,9 MHZ
Audio/5,5MHz
AF2: Audio/5,74 MHz demod.
AF1: Audio/5,5MHz
TUNER MTX4
RF in
Antenna
IF
AGC
IIC
SAW Fi3
Sound trap
Fi4 5,5 MHz
Li6 38,9 MHz
VIDEO DEMOD. TDA3840 ICi2
Ti1
Tuner AGC
CVBS/RF
TV ident.
NICAM 728 MODULE
IIC
A2 STEREO/ DUAL SOUND IDENT.
TDA8415 ICd2
Standard 1
Standard 0
L
R
To Connector Unit
AUDIO PROCESSOR TDA8421 ICd3
AUDIO OUTPUT APLIFIER TDA1521 ICp1
4 ohm
HEADPHONES AMPLIFIER TL322 ICd4

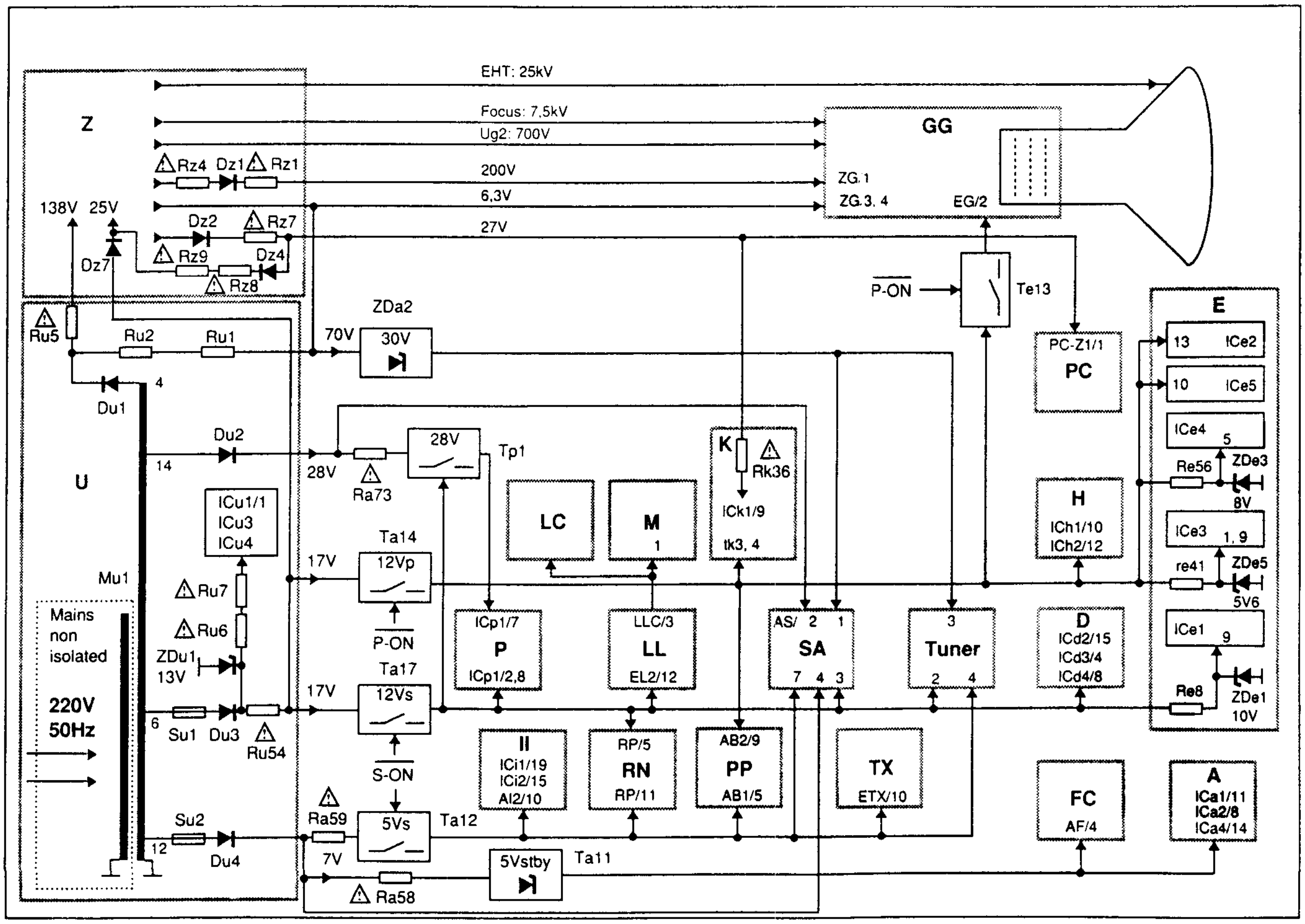
COLOUR DECODER BLOCK DIAGRAM


CVBS/Scart 2
CVBS/Scart 1
CVBS/RF
C/Camera Connector
Y/Camera Connector
Y/Connector Unit
C/Connector Unit
CVBS, Y/Scart 1
CVBS/Scart 2
CVBS/Satellite Tuner
VIDEO MATRIX SWITCH
TEA 6415 ICe1
IIC
C/SVHS
CVBS
Colour filter Le2
Secam
te1
MULTI STANDARD COLOUR DECODER
TDA4650 ICe2
8,8 MHz
-(R-Y)
-(B-Y)
HUE/NTSC
SWITCHED CAPACITOR DELAY LINE
TDA4660 ICe3
CTI
TDA4565
From ICh1 pin 17
ce74
re74
ce73
re73
Y
te6
de6
de7
4,43 MHz trap
re29
re28
Le4
Y/SVHS
te7
Peaking
te12
C/SVHS, CVBS
Y/SVHS, CVBS
PIP MODULE PP 500
Vert sync
R, G, B and FB signals from Scart 2
BL
BE
SVHS from ICh2 pin 10
TXT MODULE TX 500
OSD
TV
TXT
To Subtitle Recording Module
Even (deinterlacing) to ICh1 pin 3
Vert sync from ICh2 pin20
OSD from ICa1 pin 9
Composite sync to ICh1 pin 5
FB
R
G
B
RGB PROC.
TDA 4680 ICe4
BC
BCL from Mz2 pin 8
VIDEO OUTPUT AMPLIFIER
TEA5101A ICg1

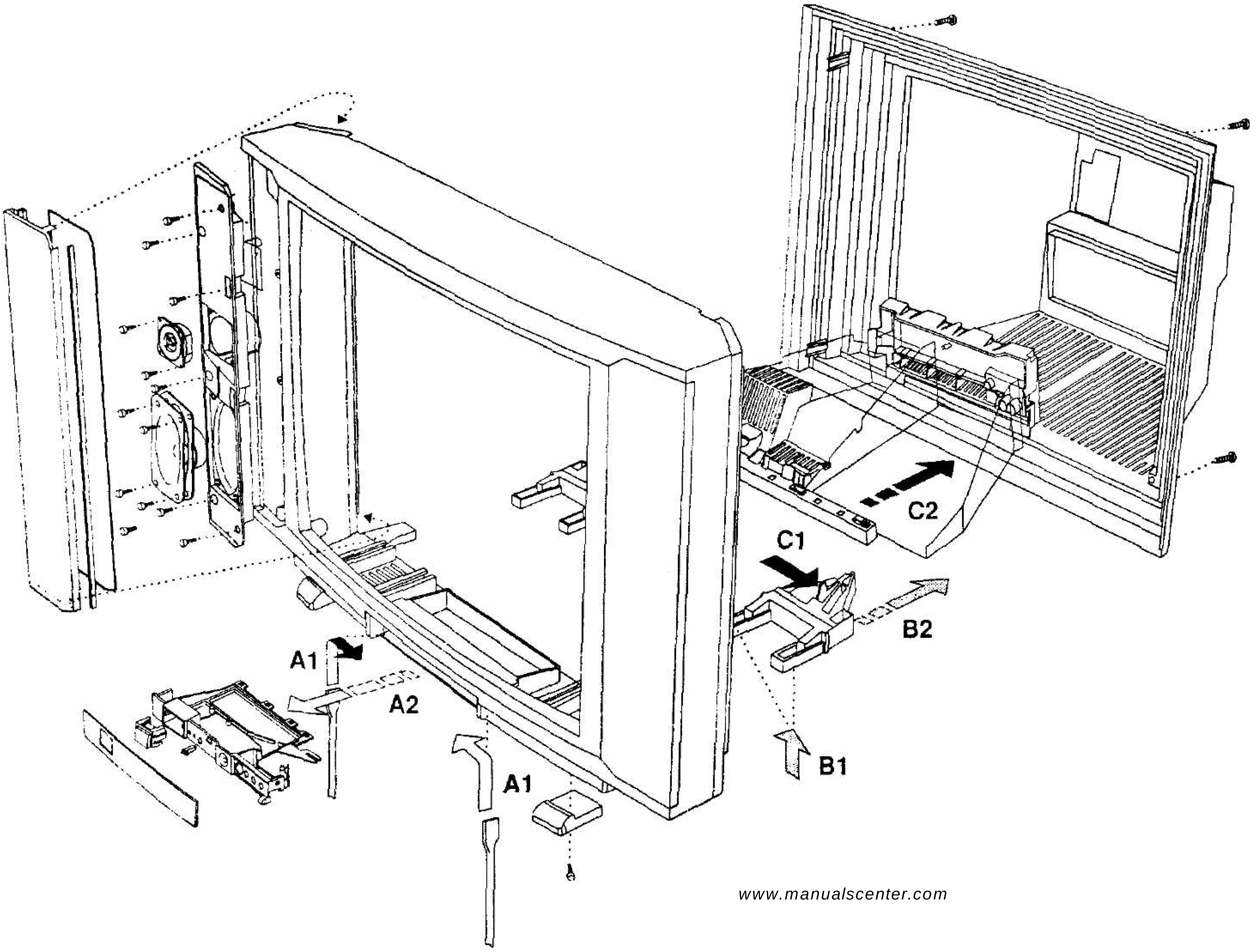
µP AND CONNECTOR UNIT BLOCK DIAGRAM

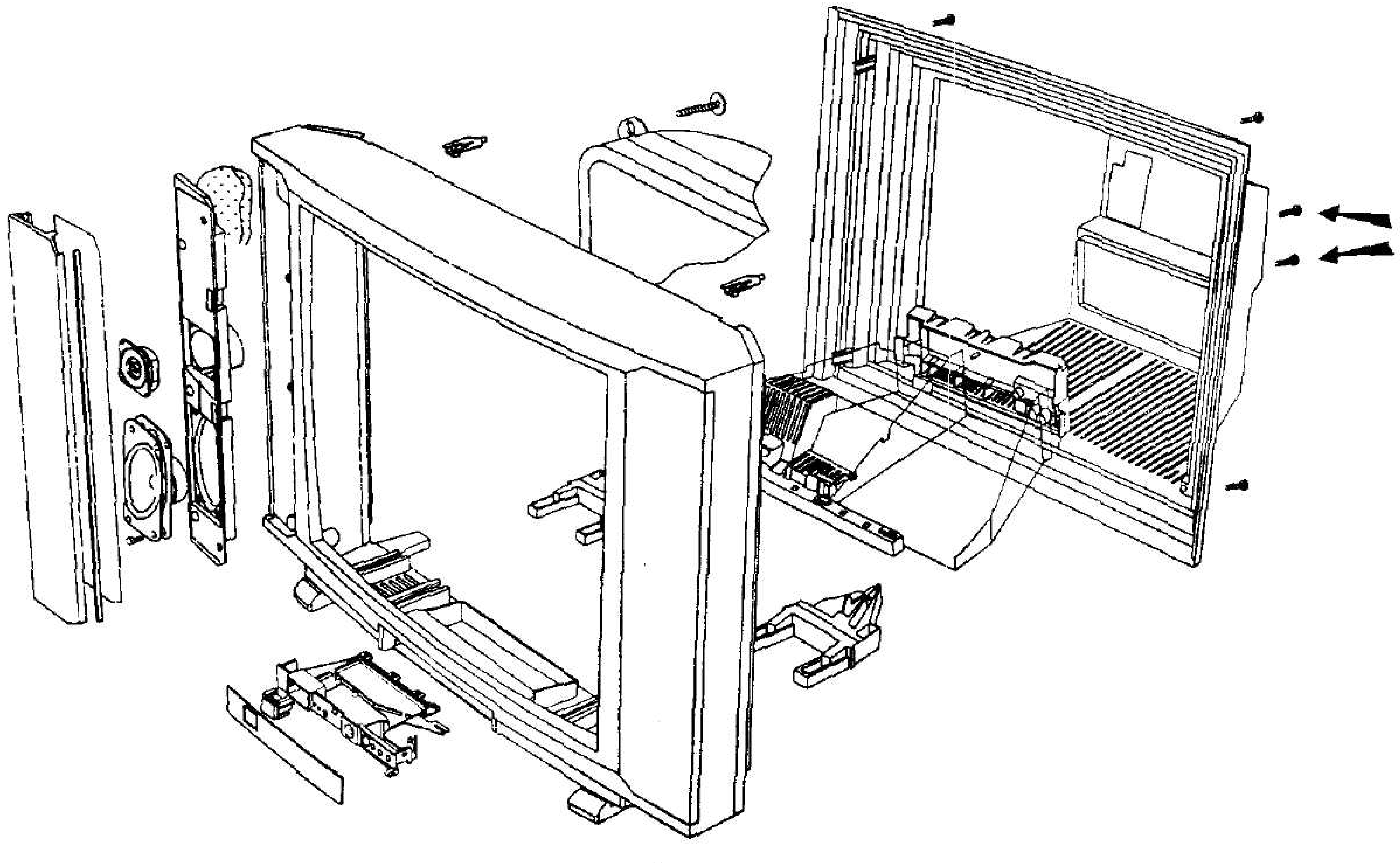

A
CONNECTOR MODULE LL
SCART 1
20
CVBS, Y
15
C
19
CVBS 1
TI2
8
L, R
3, 1
L, R
6, 2
SUBTITLE RECORDING MODULE
3
2
7
5
3
FB from Text Module
Y from Text Module
CVBS 1 from ICe1, pin 13
SERVICE CONNECTOR
IIC
8 kbit NV RAM SDA2586 ICa2
5, 6
IIC
Hold
Txt insert
STA 1
STA 2
RGB STA
from te15
ta19
33, 34
IIC Interface
µP SDA20320 ICa1
Programme Memory 32 kbyte
Data Memory 256 byte
CPU 8 bit
2
8
37
36
40
30
26
27
28
13
12
18
35
39
3
15
5
4
19
25
38
9
24
23
8.8 MHz
Step
Select
Crosstalk to ICi1, pin 7
Y delay 2 to te11
Y delay 1 to te11
AGC to ti4
IR
TV ident from ICi2, pin 6
OSD to Txt Mod.
P-ON to Ta14
S-ON to Ta11, Ta17
Vert shift to tk4
CAMERA CONNECTORS LC
To ICl1 pins 4, 11
R
L
RCA
CVBS
Y
To ICe1 pins 1, 3
C
4
3
SVHS Mini Din
Start switch
HP
Headphone connector switch
JCf1
CONTROL MODULE FC
SCART 2
20
19
CVBS
8
3, 1
L, R
6, 2
TI9
TI10
ICl2 4053
5, 12
4, 14
3, 13
9, 10, 11
ICl1 4052
5, 14
2, 15
3, 13
4, 11
1, 12
9
10
L in, R in from Camera Connector
L
R
RCA
C
4
3
Y
SVHS Mini Din
To ICe1 pins 6, 8
TI5
TI6
TI7
B
A
C
TI13
TI14
TI11
TI12
L in
R in
L out
R out
ICa4 4013 Line sync ident.
ta21 Sync sep.
A
C
B
CVBS/Y from ICe1, pin 15
R, G, B, FB to ICe4

POWER SUPPLY BLOCK DIAGRAM


EHT: 25kV
Focus: 7.5kV
Ug2: 700V
200V
6.3V
27V
Z
Rz4
Dz1
Rz1
138V
25V
Dz2
Rz7
Rz9
Dz4
Dz7
Rz8
GG
ZG 1
ZG 3, 4
EG/2
P-ON
Te13
PC-Z1/1
PC
E
13 ICe2
10 ICe5
ICe4 5
Re56
ZDe3 8V
ICe3 1, 9
re41
ZDe5 5V6
ICe1 9
Re8
ZDe1 10V
Ru5
Ru2
Ru1
70V
ZDa2 30V
Du1
4
U
Du2
14
28V
Ra73
28V
Tp1
K
Rk36
ICk1/9
tk3, 4
LC
M
1
H
ICh1/10
ICh2/12
ICu1/1
ICu3
ICu4
Mu1
Ru7
Ru6
ZDu1 13V
Ta14
17V
12Vp
P-ON
Ta17
17V
12Vs
S-ON
ICp1/7
P
ICp1/2,8
LLC/3
LL
EL2/12
AS/ 2 1
SA
7 4 3
3
Tuner
2 4
D
ICd2/15
ICd3/4
ICd4/8
Mains non isolated
220V 50Hz
6
Su1
Du3
Ru54
II
ICi1/19
ICi2/15
AI2/10
RP/5
RN
RP/11
AB2/9
PP
AB1/5
TX
ETX/10
FC
AF/4
A
ICa1/11
ICa2/8
ICa4/14
Su2
12
Du4
Ra59
7V
5Vs
Ta12
S-ON
Ra58
5Vstby
Ta11

SERVICE POSITION OF 5000 K-SERIE



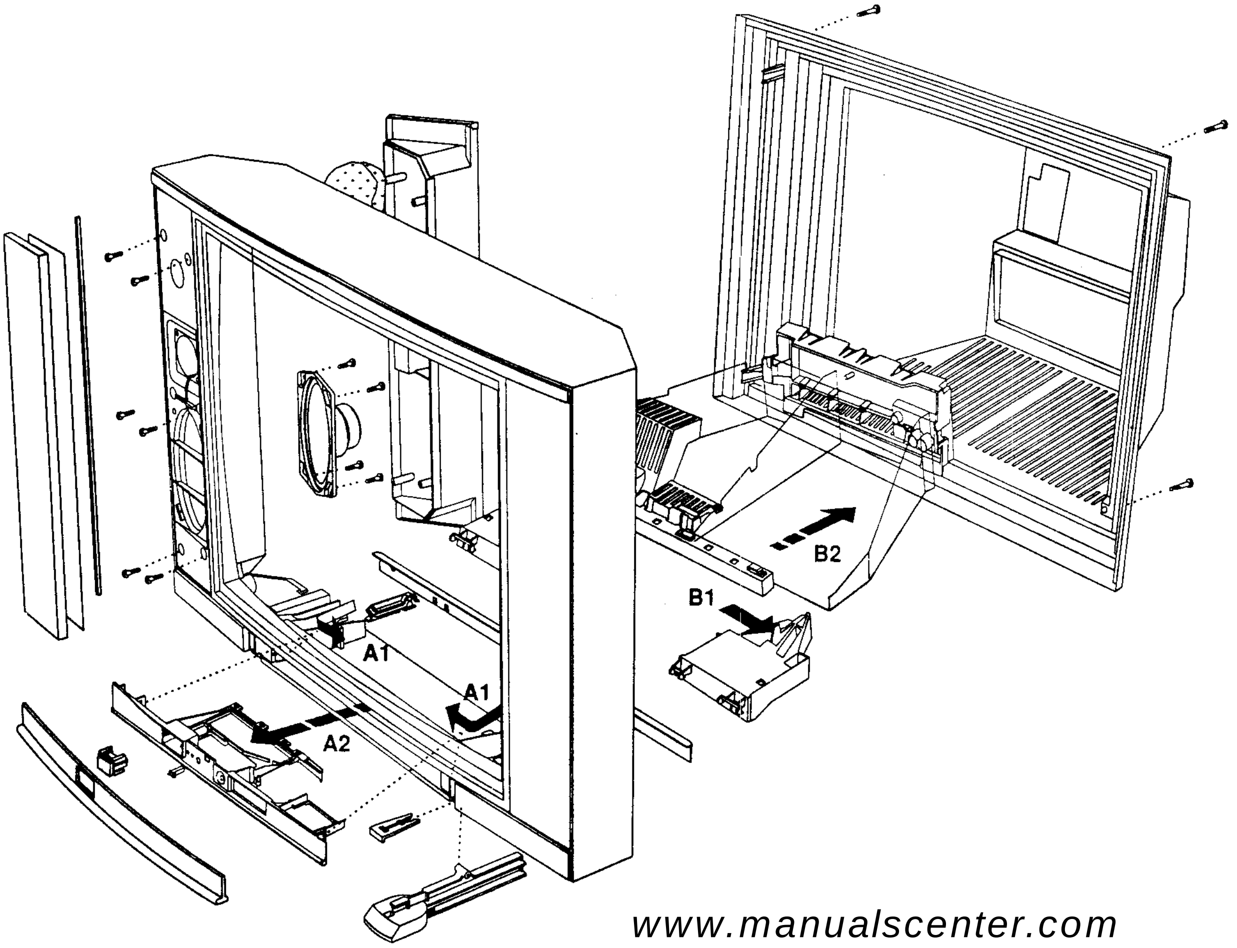


Note! If the TV set is equipped with the inner satellite receiver (SA500), open two fastening screws **before** removing the back cover.

Beachten Sie! Wenn das Gerät den integrierten Satellitentuner (SA500) enthält, die zwei Schrauben losschrauben, **bevor** der Rückwand entfernt wird.

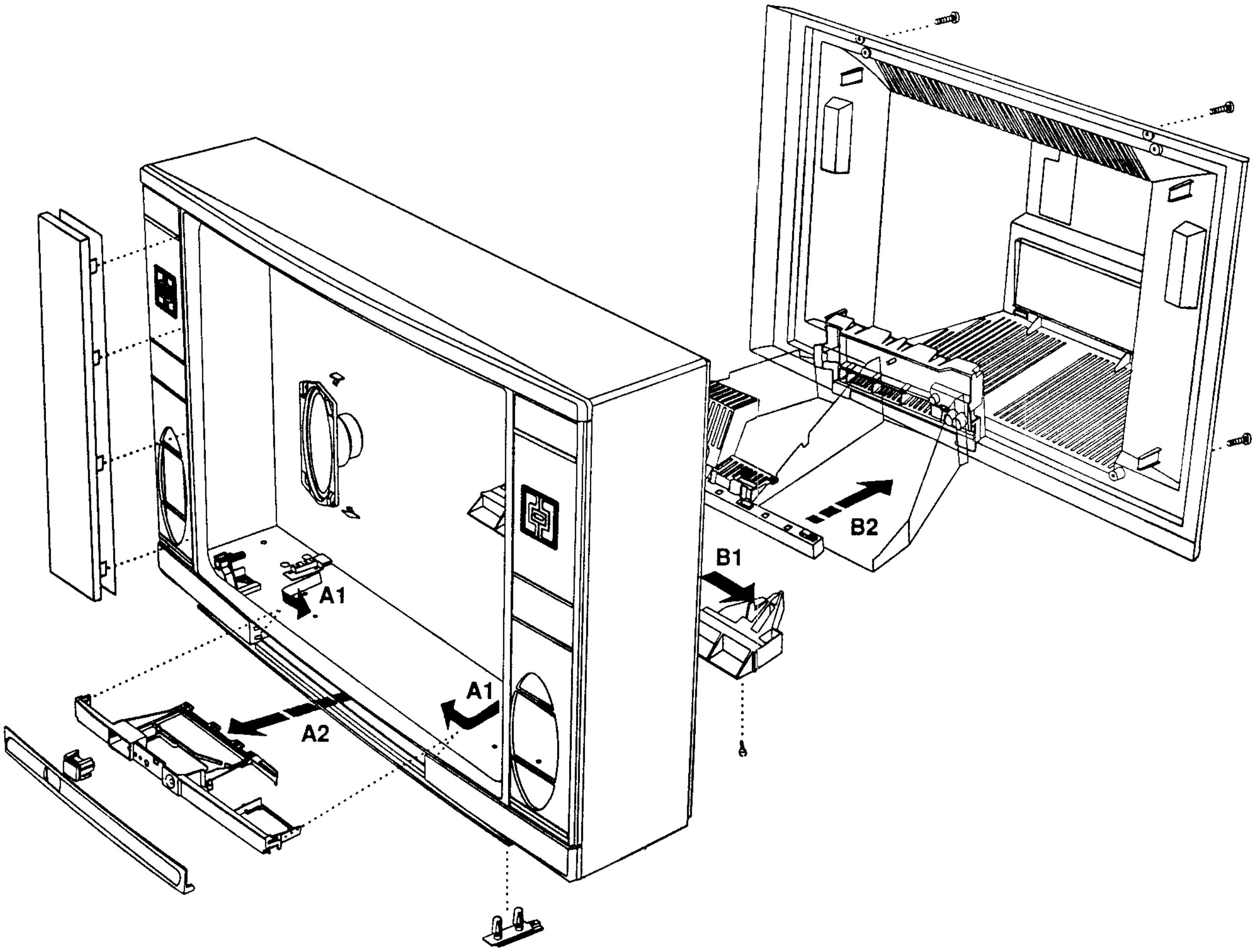
Huom! Jos TV-vastaanotin on varustettu sisäisellä satelliittivastaanottimella (SA500), irroita satelliittimodulin kiinnitysruuvit **ennen** takakannen irroitusta.

SERVICE POSITION OF 5000 F-SERIE



B2
B1
A1
A1
A2

SERVICE POSITION OF 5000 E- and M-SERIES



B2
B1
A1
A1
A2

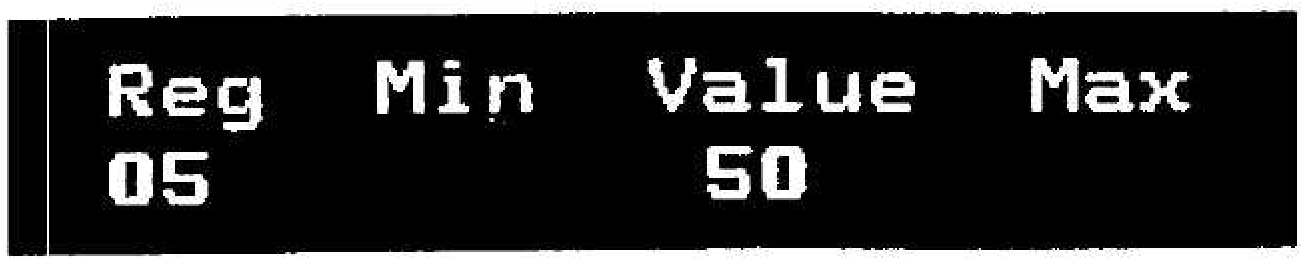
SERVICE ADJUSTMENTS VIA IIC DATA BUS

Before making adjustments with RC hand unit, make sure the supply voltage is correctly adjusted. (See Service adjustments/power supply block)

SERVICE MODE SELECTION

TV receiver is set to the service mode by switching the receiver on by pressing the mains switch and within 5 seconds the TV, PRG and EXT buttons successively. In the service mode an adjustment bar (register number, adjustment value and min/max values) is shown on the screen.

The version number of the NVM on the screen indicates the selected service mode.The first digit shows the series, the second digit shows the version number (eq. 50, where 5 = 5000-series and 0 = first version of the NVM). The version number of the NVM can also be asked by pressing "05" buttons.



```
Reg   Min   Value   Max
05           50
```

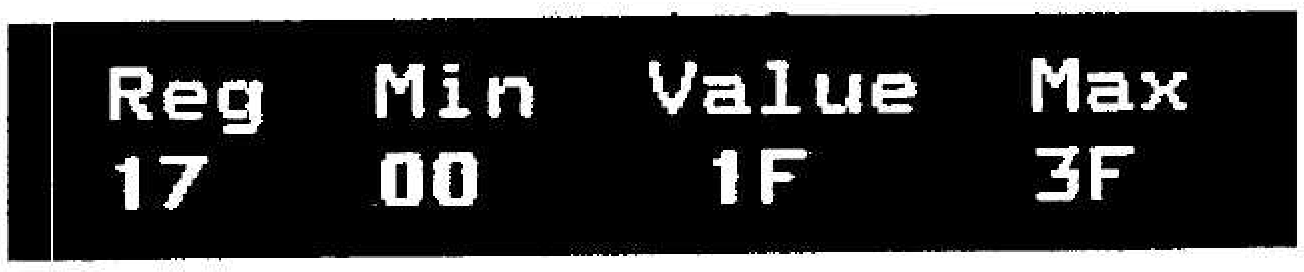
You can select the normal TV mode or the service mode again by pressing the TV (TV mode) or EXT (service mode) button. Return from service mode to normal TV mode by reseting the set with the mains switch.

REMOTE CONTROL COMMANDS IN SERVICE MODE

Number buttons and cursor buttons (left and right) of the hand unit are used for service adjustments. Analog controls function normally; teletext controls and other special controls don't function.

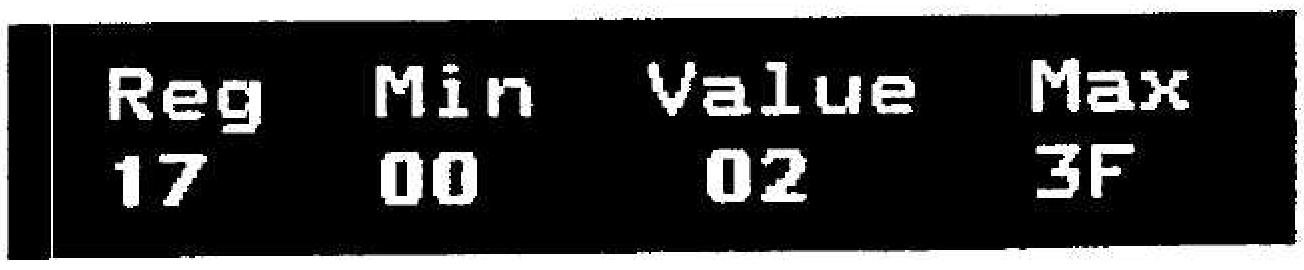
Making the service adjustments

1. Give a two numbered code which determines the adjustment (e.g. 17 =picture width) with number buttons.



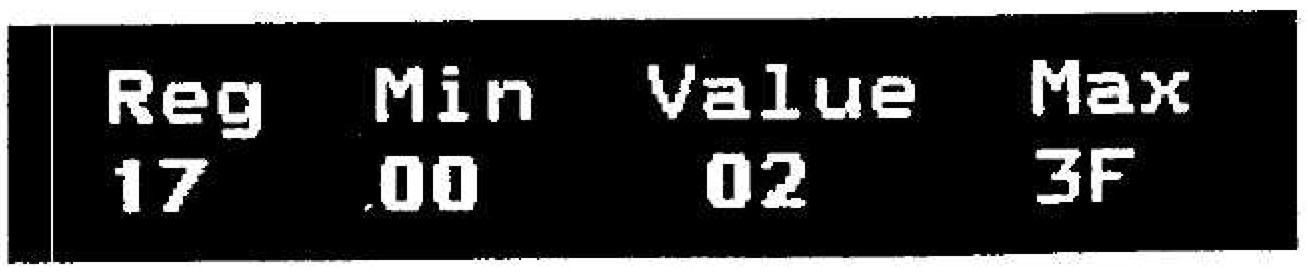
```
Reg   Min   Value   Max
17    00     1F     3F
```

2. Make the adjustment by pressing the cursor buttons (left or right). The earlier stored adjustment value is shown red coloured.



```
Reg   Min   Value   Max
17    00     02     3F
```

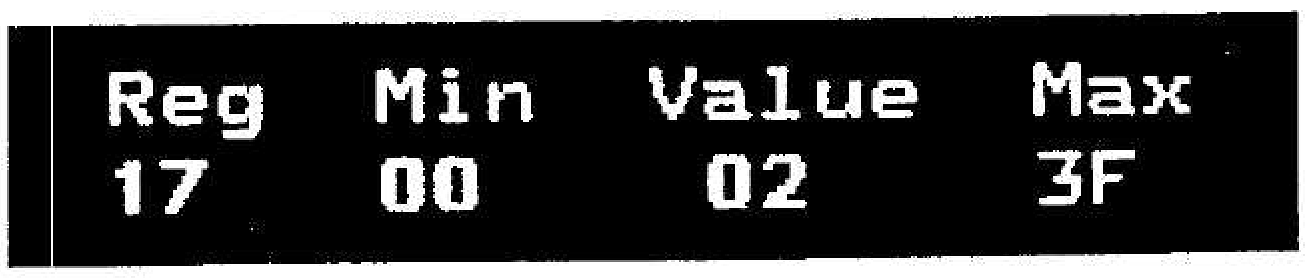
3. Store the adjusted value to the NVM by pressing the blue button. You must store each function separately.



```
Reg   Min   Value   Max
17    00     02     3F
```

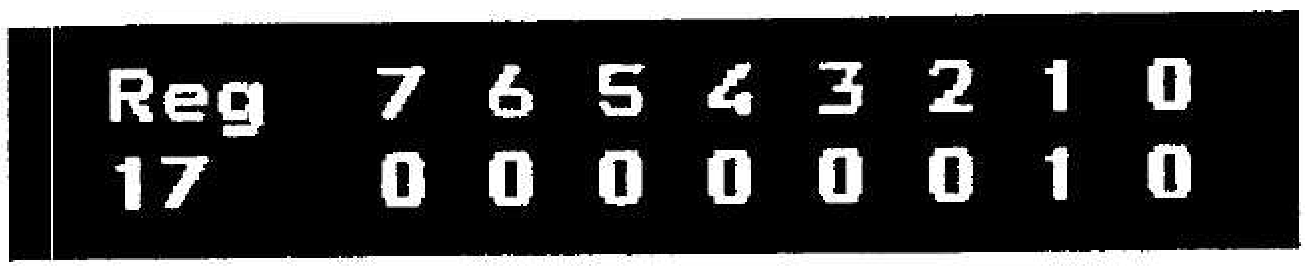
Alternative
For special settings

1. Give a two numbered code which determines the adjustment (e.g. 17 =picture width) with number buttons.



```
Reg   Min   Value   Max
17    00     02     3F
```

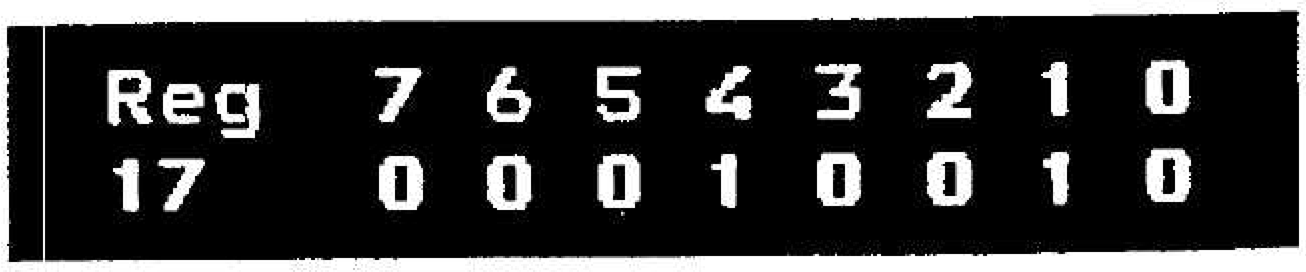
2. Select binary code display by pressing the red button.



```
Reg   7 6 5 4 3 2 1 0
17    0 0 0 0 0 0 1 0
```

3. Activate the adjustment by pressing the yellow button.

4. Make the adjustment by pressing the number buttons. E.g number button 4 will change the logical level of the bit number 4 from 0 to 1. The earlier stored adjustment value is shown red coloured.

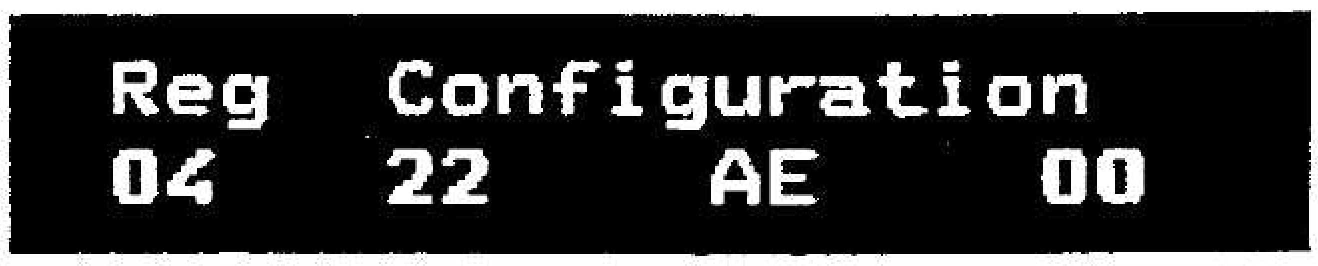


```
Reg   7 6 5 4 3 2 1 0
17    0 0 0 1 0 0 1 0
```

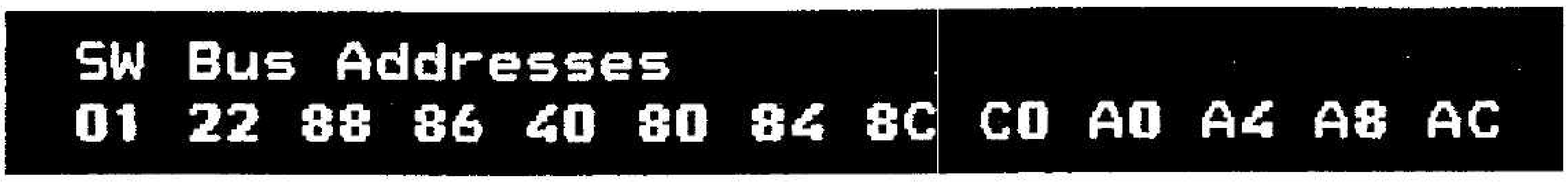
5. Store the adjusted value to the NVM by pressing the blue button. You must store each function separately. If you don't want to store the adjustment, press the i button.

CONFIGURATION AND FAULT DIAGNOSIS FOR CIRCUITS CONNECTED TO THE IIC-BUS

By pressing 04 in the service mode, the processor checks all possible addresses of bus driven circuits and shows the found addresses on the screen. The set must be configurated after adding or removing some options.



```
Reg   Configuration
04    22     AE     00
```



```
SW Bus Addresses
01 22 88 86 40 80 84 8C CO A0 A4 A8 AC
```

The old configuration value is shown on the screen until new configuration is stored into NVM by pressing the blue button. The set takes the new configuration in use only after reseting the set with the mains switch. The configuration serves also as a fault diagnosis system.

Note! Disconnect the antenna cable before starting the configuration. Make the configuration always without signal.

Address	Circuit
10	µP software version, ICa1 (SDA20320)
12	µP of the build in satellite receiver, ICf2 (S83C751)
22	Computer Controlled Teletext (CCT), ICt4 (SAA5246)
2E	PIP Processor, ICp4 (SDA9088-2)
88	RGB Processor (RGB), ICe4 (TDA4680)
40	Nicam Controller, ICr4 (PCF8574)
86	Video/Audio Switch, ICe1 (TEA6415)
80	Sound Processor, ICd3 (TDA8421)
84	A2-Stereo/Dual Sound Identifier, ICd2 (TDA8415)
8C	Sync Controller, ICh2 (TDA8433)
C0	Hyperband Tuner PLL, (TSA5510)
C6	UHF Tuner PLL, (TSA5510)
A0	NVM/Service Adjustment Block A0, ICa2 (SDA2586) 2 kbits
A2	Sat NVM/Service Adjustment Block A2, ICf1 (SDA2586) 2 kbits
A4	NVM/Memory Block A4, ICa2 (SDA2586) 2 kbits
A6	Sat NVM/Memory Block A6, ICf1 (SDA2586) 2 kbits
A8	NVM/Memory Block AB, ICa2 (SDA2586) 2 kbits
AA	Sat NVM/Memory Block AA, ICf1 (SDA2586) 2 kbits
AC	NVM/Memory Block AC, ICa2 (SDA2586) 2 kbits
AE	Sat NVM/Memory Block AE, ICf1 (SDA2586) 2 kbits
Sat SW	
01	µP software version of the build in satellite receiver

MECHANICAL PARTS 5025, -28K

Pos.	Description		Orderno:	PG
1.	Cabinet (incl. speakers)	28" black	82038017	049
		28" white	82038024	049
		25" black	82028015	049
		25" white	82028022	049
2.	Picture tube A66ECY13x01MP	28"	46002897	059
	Picture tube A59ECY13x01	25"	46002880	059
3.	Degaussing coils	28"	93030032	026
		25"	93020035	026
4.	Wire support, degaussing coils		80424126	003
5.	Wire support, degaussing coils		80403115	003
6.	Picture tube fastenig screw		62034015	005
7.	Wire support, degaussing coils		00103584	002
8.	Safety cover		80307205	006
9.	Connector frame	2 scart	80307515	011
10.	Chassis support fastening (pair)	25"	80307035	010
		28"	80307004	010
12.	Back cover	28" black	82402029	032
		28" white	82402050	032
		25" black	82402012	032
		25" white	82402043	032
13.	Back cover lock screw		62039222	003
14.	Back cover fastening piece		80409226	004
15.	Foot		80424027	005
16	Flap		80428005	009
17	Main switch button		80409202	006
18.	Control unit frame		80306580	015
19	Loudspeaker grill	28" black	81205611	016
		28" white	81205628	016
		25" black	81205315	016
		25" white	81205322	016
20.	Tightening band		72041002	005
21.	Dome tweeter		33004365	023
22.	Bass loudspeaker		33004444	026
23.	Loudspeaker fastening screw		62039222	003
24.	Loudspeaker tightening plate		54041239	005
25.	Front panel	25" left	80308021	015
		25" right	80308037	015
		28" left	80308045	015
		28" right	80308052	015
26.	Acoustic filter		80301602	006
27.	Shade		80302151	007
28.	Mains switch		52003134	012

MEKANISKA RESERVDELAR 5025, -28K

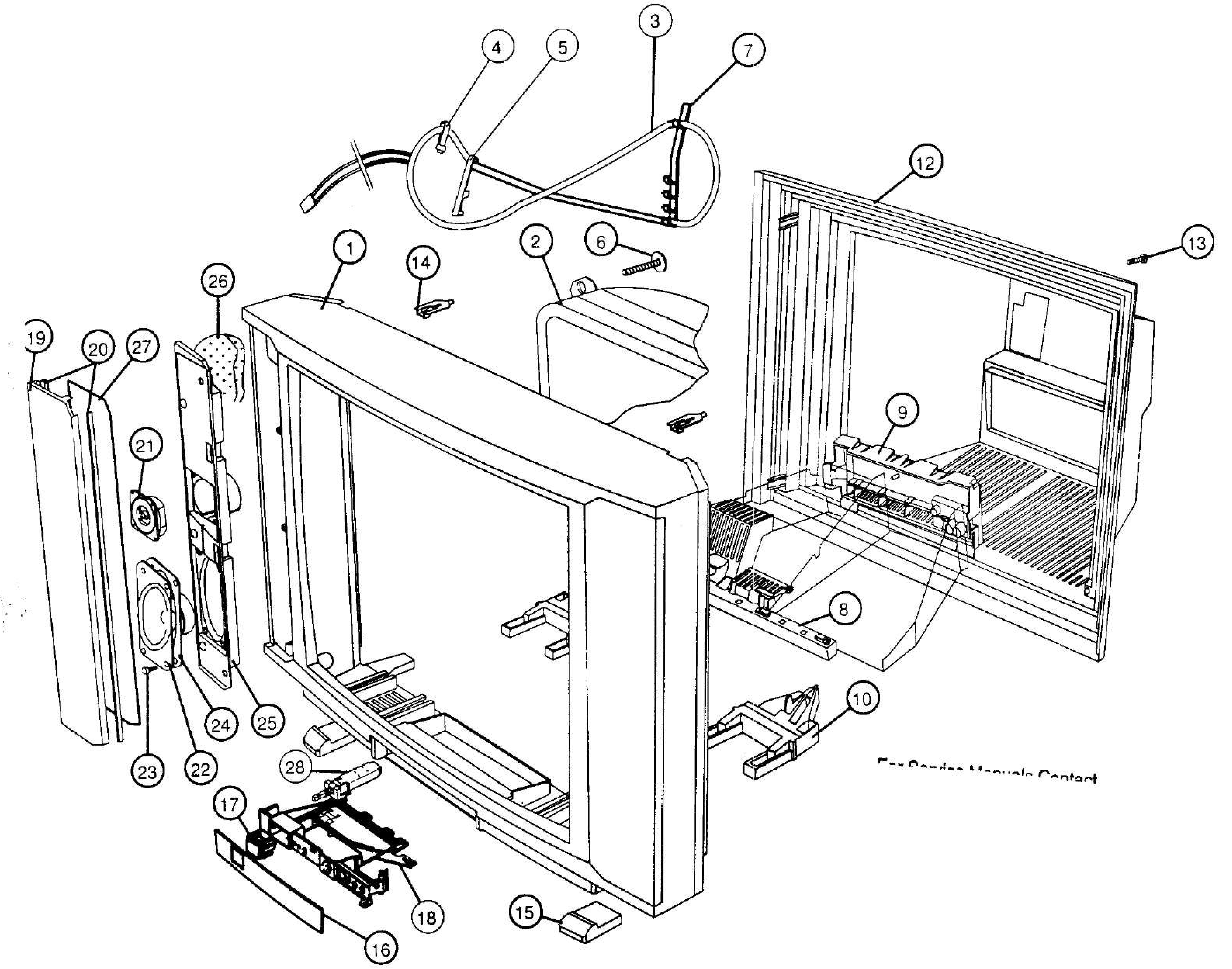
Pos.	Benämning		Art.nr.	PG
1	Låda (inkl. högtalare)	28" svart	82038017	049
		28" vit	82038024	049
		25" svart	82028015	049
		25" vit	82028022	049
2	Bildrör A66ECY13x01MP	28"	46002897	059
	Bildrör A59ECY13x01	25"	46002880	059
3.	Demagnetiseringsspol	28"	93030032	026
		25"	93020035	026
4.	Hållare för demagnetiseringsspol		80424126	003
5	Hållare för demagnetiseringsspol		80403115	003
6.	Fästmutter för bildrör		62034015	005
7.	Hållare för demagnetiseringsspol		00103584	002
8.	Säkerhetsskydd		80307205	006
9.	Kontaktram	2 scart	80307515	011
10.	Bärskena för chassis, nedre	25"	80307035	010
		28"	80307004	010
12.	Bakstycke	28" svart	82402029	032
		28" vit	82402050	032
		25" svart	82402012	032
		25" vit	82402043	032
13.	Låsskruv för bakstycke		62039222	003
14.	Fästdon för bakstycke		80409226	004
15.	Fot		80424027	005
16.	Lucka		80428005	009
17.	Tryckknap för nätströmbrytare		80409202	006
18.	Kontrollenhetsram		80306580	015
19.	Högtalargaller	28" svart	81205611	016
		28" vit	81205628	016
		25" svart	81205315	016
		25" vit	81205322	016
20.	Fastsättningsband		72041002	016
21.	Domehögtalare		33004365	005
22.	Bashögtalare		33004444	023
23.	Låsskruv för högtalare		62039222	003
24.	Tätning		54041239	005
25.	Frontplatta	25" vänster	80308021	015
		25" höger	80308037	015
		28" vänster	80308045	015
		28" höger	80308052	015
26.	Dämpningsfylling		80301602	006
27.	Täcke		80302151	007
28.	Nätströmbrytare		52003134	012

MECHANISCHE ERSATZZTEILE 5025, -28K

Pos.	Bezeichung		Et-Nummer	PG
1.	Gehäuse (mit lautsprecher)	28" schwarz	82038017	049
		28" weiss	82038024	049
		25" schwarz	82028015	049
		25" weiss	82028022	049
2.	Bildröhre A66ECY13x01 MP	28"	46002897	059
	Bildröhre A59ECY13x01	25"	46002880	059
3.	Entmagnetisierungsspule	25"	90200035	026
		28 "	93030032	026
4.	Halter für Entmagnetisierungsspule		80424126	003
5.	Halter für Entmagnetisierungsspule		80403115	003
6.	Bildröhr mutter		62034015	005
7.	Halter für Entmagnetisierungsspule		00103584	002
8.	Berühregs schutz		80307205	006
9.	Vorrichtungskörper	2 scart	80307515	011
10.	Befestigungsstück des Chassis	25"	80307035	010
		28"	80307004	010
12.	Gehäuseseitenteil	28" schwarz	82402029	032
		28" weiss	82402050	032
		25" schwarz	82402012	032
		25" weiss	82402043	032
13.	Befestigungsschraube der rückwand		62039222	003
14.	Schlosskörper der Rückwand		80409226	005
15.	Fuss		80424027	005
16.	Klappe		80428005	009
17.	Knop für Netzschalter		80409202	006
18.	Bedienteilrahmen		80306580	015
19.	Lautsprechergitter	28" schwarz	81205611	016
		28" weiss	81205628	016
		25" schwarz	81205315	016
		25" weiss	81205322	016
20.	Dichtungband		72041002	016
21.	Kalottenhochton-Lautsprecher		33004365	005
22.	Tieftonlautsprecher		33004444	023
23.	Befestigungsschraube		62039222	003
24.	Dichtung des Lautsprechers		54041239	005
25.	Vorerplatte	25" links	80308021	015
		25" rechts	80308037	015
		28" links	80308045	015
		28" rechts	80308052	015
26.	Füllungsstoff		80301602	006
27.	Decke		80302151	007
28.	Netzschalter		52003134	012

MEKAANISET OSAT 5025, -28K

Viite	Osa/arvo		Til.no.	HR
1.	Kotelo (sis.kaiuttimet)	28" musta	82038017	049
		28" valkoinen	82038024	049
		25" musta	82028015	049
		25" valkoinen	82028022	049
2.	Kuvaputki A66ECY13x01MP	28"	46002897	059
	Kuvaputki A59ECY13x01	25"	46002880	059
3.	Demagnetointikela	28"	93030032	026
		25"	93020035	026
4.	Demagnetointikelan pidin		80424126	003
5	Demagnetointikelan pidin		80403115	003
6.	Kuvaputken kiinnitysruuvi		62034015	005
7.	Demagnetointikelan pidin		00103584	002
8.	Kosketus suoja		80307205	006
9.	Takapeitelevy	2 scart	80307515	011
10.	Kojeiston alakinnikepari	25"	80307035	010
		28"	80307004	010
12.	Takaseinä	28" musta	82402029	032
		28" valkoinen	82402050	032
		25" musta	82402012	032
		25" valkoinen	82402043	032
13.	Takaseinän kiinnitysruuvi		62039222	003
14.	Takaseinän kiinitysosa		80409226	004
15.	Jalka		80424027	005
16.	Luukku		80428005	009
17.	Verkkokytkimen nuppi		80409202	006
18.	Säätöyksikön runko		80306580	015
19.	Kaiutinritilä	28" musta	81205611	016
		28" valkoinen	81205628	016
		25" musta	81205315	016
		25" valkoinen	81205322	016
20.	Tiiviste nauha		72041002	016
21.	Kalottikaiutin		33004365	005
22.	Basso kaiutin		33004444	023
23.	Kaiuttimen kiinnitysruuvi		62039222	003
24.	Kaiutin tiiviste		54041239	005
25.	Etulevy	25" vasen	80308021	015
		25" oikea	80308037	015
		28" vasen	80308045	015
		28" oikea	80308052	015
26.	Vaimennus täyte		80301602	006
27.	Kaiutinritilän suojus		80302151	007
28.	Verkkokytkin		52003134	012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For Service Manuals Contact

MECHANICAL PARTS 5021, -25, -28F

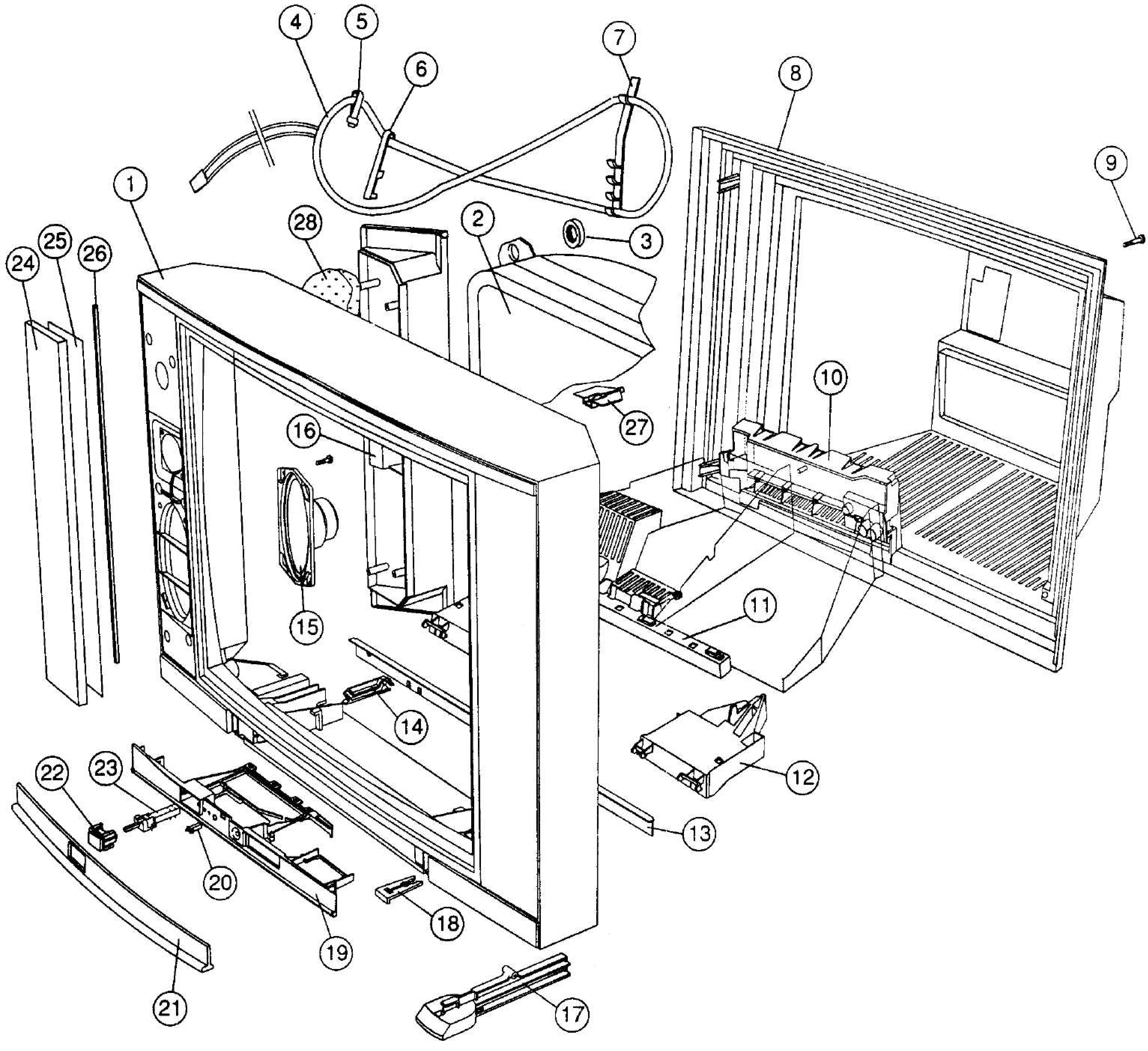
Pos.	Description		Orderno:	PG
1.	Cabinet	28" digiblack	82030860	048
		25" digiblack	82020861	048
		21" digiblack	82010868	047
2.	Picture tube A66ECY13x01MP	28"	46002897	059
	Picture tube A59ECY13x01	25"	46002880	059
	Picture tube A51KHA40x01	21"	46002917	055
3.	Picture tube fastenig screw		63017126	003
4.	Degaussing coils	28"	93030032	026
		25"	93020035	026
		21"	93010021	026
5.	Wire support, degaussing coils		80424126	003
6.	Wire support, degaussing coils		80424133	003
7.	Wire support, degaussing coils		80403115	003
8.	Back cover	28" black	82402029	032
		25" black	82402102	032
		21" black	82402005	030
9.	Back cover lock screw		62039222	003
10.	Connector frame	1 scart	80307522	006
11.	Safety cover		80307205	006
12.	Chassis support fastening (pair)	28"	80307011	010
		25"	80307042	010
		21"	80307059	010
13.	Support	28"	81300743	016
		25"	81300750	016
14.	Strain relief		80413545	008
15.	Loudspeaker		33004396	026
16.	Back cover of loudspeaker	28"	80302436	014
		25"	80302429	
		21"	80302498	014
17.	Foot		80413497	011
18.	Foot fastening slide		80413552	008
19.	Control unit frame		80306185	015
20.	Locking piece		80413473	006
21.	Flap		80430008	016
22.	Main switch button		80409202	006
23.	Mains switch		52003134	012
24.	Loudspeaker grill	28"	81200947	016
		25"	81200930	016
		21"	81200923	016
25.	Shade	28"	80301028	011
		25"	80301011	011
		21"	80301004	012
26.	Tightening band		72040782	003
27.	Back cover fastening piece	28", 25"	80409233	006
		21"	80409339	006
28.	Acoustic filler		80301602	006

MEKANISKA RESERVDELAR 5021, -25, -28F

Pos.	Benämning		Art.nr.	PG
1.	Låda	28" digiblack	82030860	048
		25" digiblack	82020861	048
		21" digiblack	82010868	047
2.	Bildrör A66ECY13x01MP	28"	46002897	059
	Bildrör A59ECY13x01	25"	46002880	059
	Bildrör A51KHA40x01	21"	46002917	055
3.	Fästmutter för bildrör		63017126	003
4.	Demagnetiseringsspol	28"	93030032	026
		25"	93020035	026
		21"	93010021	026
5.	Hållare för demagnetiseringsspol		80424126	003
6.	Hållare för demagnetiseringsspol		80424133	003
7.	Hållare för demagnetiseringsspol		80403115	003
8.	Bakstycke	28" svart	82402029	032
		25" svart	82402102	032
		21" svart	82402005	030
9.	Låsskruv för bakstycke		62039222	003
10.	Kontaktram	1 scart	80307522	006
11.	Säkerhetsskydd		80307205	006
12.	Bärskena för chassis (par)	28"	80307011	010
		25"	80307042	010
		21"	80307059	010
13.	Stödjärn	28"	81300743	016
		25"	81300750	016
14.	Avlastningsanordning		80413545	008
15.	Högtalare		33004396	026
16.	Bakstycke för högtalarbox	28"	80302436	014
		25"	80302429	
		21"	80302498	014
17.	Fot		80413497	011
18.	Låsstycke för fot		80413552	008
19.	Kontrollenhetsram		80306185	015
20.	Låsstycke		80413473	006
21.	Lucka		80430008	016
22.	Tryckknap för nätströmbrytare		80409202	006
23.	Nätströmbrytare		52003134	012
24.	Högtalargaller	28"	81200947	016
		25"	81200930	016
		21"	81200923	016
25.	Täcke	28"	80301028	011
		25"	80301011	011
		21"	80301004	012
26.	Tatning		72040782	003
27.	Fästdon för bakstycke	28", 25"	80409233	006
		21"	80409339	006
28.	Dämpningsfylling		80301602	006

MECHANISCHE ERSATZTEILE 5021, -25, -28F

Pos.	Bezeichnung		Et-Nummer	PG
1.	Gehäuse	28" digiblack	82030860	048
		25" digiblack	82020861	048
		21" digiblack	82010868	047
2.	Bildröhre A66ECY13x01MP	28"	46002897	059
	Bildröhre A59ECY13x01	25"	46002880	059
	Bildröhre A51KHA40x01	21"	46002917	055
3.	Bildröhr mutter		63017126	003
4.	Entmagnetisierungsspule	28"	93030032	026
		25"	93020035	026
		21"	93010021	026
5.	Halter für Entmagnetisierungsspule		80424126	003
6.	Halter für Entmagnetisierungsspule		80424133	003
7.	Halter für Entmagnetisierungsspule		80403115	003
8.	Gehäuseseitenteil	28" schwarz	82402029	032
		25" schwarz	82402102	032
		21" schwarz	82402005	030
9.	Befestigungsschraube der rückwand		62039222	003
10.	Vorrichtungskörper	1 scart	80307522	006
11.	Berühregs schutz		80307205	006
12.	Befestigungsstück des Chassis	28"	80307011	010
		25"	80307042	010
		21"	80307059	010
13.	Unterstützung	28"	81300743	016
		25"	81300750	016
14.	Kabelhalter		80413545	008
15.	Lautsprecher		33004396	026
16.	Gehäuse Seitenteil	28"	80302436	014
		25"	80302429	
		21"	80302498	014
17.	Fuss		80413497	011
18.	Fussführung		80413552	008
19.	Bedienteilrahmen		80306185	015
20.	Schlusstück		80413473	006
21.	Klappe		80430008	016
22.	Knop für Netzschalter		80409202	006
23.	Netzschalter		52003134	012
24.	Lautsprechergitter	28"	81200947	016
		25"	81200930	016
		21"	81200923	016
25.	Decke	28"	80301028	011
		25"	80301011	011
		21"	80301004	012
26.	Dichtungband		72040782	003
27.	Schlosskörper der Rückwand	28", 25"	80409233	006
		21"	80409339	006
28.	Füllungsstoff		80301602	006



MEKAANISET OSAT 5021, -25, -28F

Viite	Osa/arvo		Til.no.	HR
1.	Kotelo	28" digiblack	82030860	048
		25" digiblack	82020861	048
		21" digiblack	82010868	047
2.	Kuvaputki A66ECY13x01MP	28"	46002897	059
	Kuvaputki A59ECY13x01	25"	46002880	059
	Kuvaputki A51KHA40x01	21"	46002917	055
3.	Kuvaputken kiinnitysruuvi		63017126	003
4.	Demagnetointikela	28"	93030032	026
		25"	93020035	026
		21"	93010021	026
5.	Demagnetointikelan pidin		80424126	003
6.	Demagnetointikelan pidin		80424133	003
7.	Demagnetointikelan pidin		80403115	003
8.	Takaseinä	28" musta	82402029	032
		25" musta	82402102	032
		21" musta	82402005	030
9.	Takakannen kiinnitysruuvi		62039222	003
10.	Takapeitelevy	1 scart	80307522	006
11.	Kosketus suoja		80307205	006
12.	Kojeiston kiinnikepari	28"	80307011	010
		25"	80307042	010
		21"	80307059	010
13.	Tukirauta	28"	81300743	016
		25"	81300750	016
14.	Vedonpoistaja		80413545	008
15.	Laajakaistakaiutin		33004396	026
16.	Takapeitelevy	28"	80302436	014
		25"	80302429	
		21"	80302498	014
17.	Jalka		80413497	011
18.	Jalan lukitusluisti		80413552	008
19.	Säätöyksikön runko		80306185	015
20.	Lukituskappale		80413473	006
21.	Luukku		80430008	016
22.	Verkkokytkimen nuppi		80409202	006
23.	Verkkokytkin		52003134	012
24.	Kaiutinritilä	28"	81200947	016
		25"	81200930	016
		21"	81200923	016
25.	Kaiutinritilän suojus	28"	80301028	011
		25"	80301011	011
		21"	80301004	012
26.	Tiivistenauha		72040782	003
27.	Takakannen kiinitysosa	28", 25"	80409233	006
		21"	80409339	006
28.	Vaimennustäyte		80301602	006

MECHANICAL PARTS 5025, -28E

Pos.	Description		Orderno:	PG
1.	Cabinet	28" digiblack	82003222	047
		25" digiblack	82002229	046
2.	Picture tube A66ECY13x01MP	28"	46002897	059
	Picture tube A59ECY13x01	25"	46002880	059
3.	Picture tube fastenig screw		63017126	003
4.	Degaussing coils		93030032	026
		25"	93020035	026
5.	Wire support, degaussing coils		80424126	003
6.	Wire support, degaussing coils		80403115	003
7.	Wire support, degaussing coils		80424133	003
8.	Back cover fastening piece		80409226	004
9.	Back cover	28" black	82402114	032
		25" black	82402107	032
10.	Back cover lock screw		62039222	003
11.	Connector frame	1 scart	80307522	006
12.	Safety cover		80307205	006
13.	Chassis support fastening (pair)	25"	80307073	010
		28"	80307066	010
14.	Loudspeaker fastening clamp		54040786	003
15.	Loudspeaker		33004396	026
16.	Strain relief		00103671	005
17.	Picture tube fastening point	upper left	80402350	005
		upper right	80402367	005
		lower left	80402374	005
		lower right	80402381	005
18.	Control unit frame		80306781	015
19.	Foot		80413655	005
20.	Mains switch		52003134	012
21.	Main switch button		80409202	006
22.	Flap		80434146	011
23.	Loudspeaker grill	28"	81202070	022
		25"	81202063	022
24.	Shade	28"	80302003	011
		25"	80302010	011
25.	Locking piece		80413473	006

MECHANISCHE ERSATZZTEILE 5025, -28E

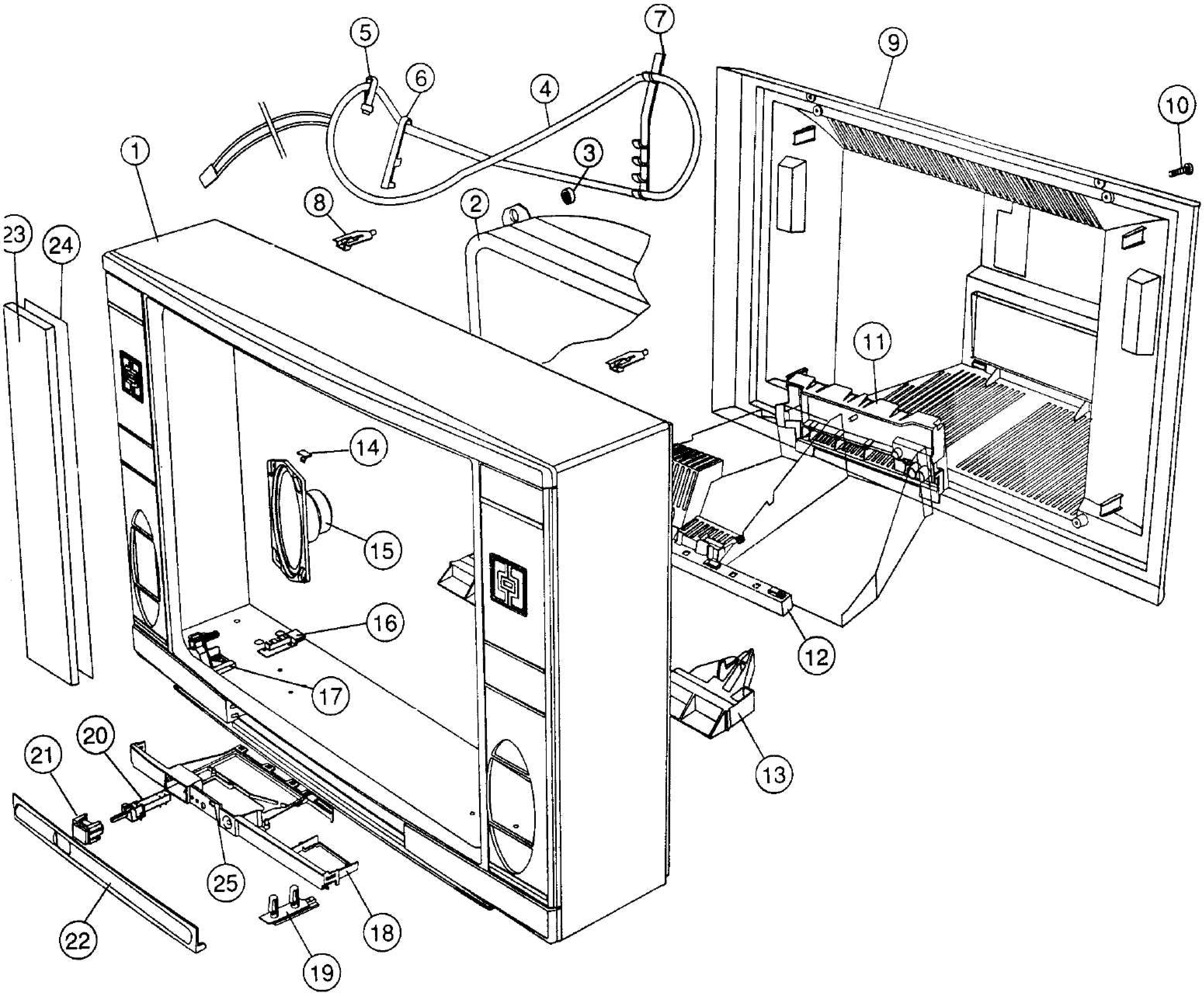
Pos.	Bezeichung		Et-Nummer	PG
1.	Gehäuse	28" digiblack	82003222	047
		25" digiblack	82002229	046
2.	Bildröhre A66ECY13x01 MP	28"	46002897	059
	Bildröhre A59ECY13x01	25"	46002880	059
3.	Bildröhr mutter		63017126	003
4.	Entmagnetisierungsspule	28 "	93030032	026
		25"	93020035	026
5.	Halter für Entmagnetisierungsspule		80424126	003
6.	Halter für Entmagnetisierungsspule		80403115	003
7.	Halter für Entmagnetisierungsspule		80424133	003
8.	Schlosskörper der Rückwand		80409226	004
9.	Gehäuseseitenteil	28" schwarz	82402114	032
		25" schwarz	82402107	032
10.	Befestigungsschraube der rückwand		62039222	003
11.	Vorrichtungskörper	1 scart	80307522	006
12.	Berühregs schutz		80307205	006
13.	Befestigungsstück des Chassis	25"	80307073	010
		28"	80307066	010
14.	Haltklammer für Lautsprecher		54040786	003
15.	Lautsprecher		33004396	026
16.	Kabelhalter		00103671	005
17.	Befestigungsstück für Bildröhre	Oben links	80402350	005
		Oben rechts	80402367	005
		Unten links	80402374	005
		Unten rechts	80402381	005
18.	Bedienteilrahmen		80306781	015
19.	Fuss		80413655	005
20.	Netzschalter		52003134	012
21.	Knop für Netzschalter		80409202	006
22.	Klappe		80434146	011
23.	Lautsprechergitter	28"	81202070	022
		25"	81202063	022
24.	Decke	28"	80302003	011
		25"	80302010	011
25.	Schlusstück		80413473	006

MEKANISKA RESERVDELAR 5025, -28E

Pos.	Benämning		Art.nr.	PG
1.	Låda	28" svart	82003222	047
		25" svart	82002229	046
2.	Bildrör A66ECY13x01 MP	28"	46002897	059
	Bildrör A59ECY13x01	25"	46002880	059
3.	Fästmutter för bildrör		63017126	003
4.	Demagnetiseringsspol	28 "	93030032	026
		25"	93020035	026
5.	Hållare för demagnetiseringsspol		80424126	003
6.	Hållare för demagnetiseringsspol		80403115	003
7.	Hållare för demagnetiseringsspol		80424133	003
8.	Fästdon för bakstycke		80409226	004
9.	Bakstycke	28" svart	82402114	032
		25" svart	82402107	032
10.	Låsskruv för bakstycke		62039222	003
11.	Kontaktram	1 scart	80307522	006
12.	Säkerhetsskydd		80307205	006
13.	Bärskena för chassis	25"	80307073	010
		28"	80307066	010
14.	Låsklämma för högtalare		54040786	003
15.	Högtalare		33004396	026
16.	Avlastningsanordning		00103671	005
17.	Låsöra för bildröre	övre venster	80402350	005
		övre höger	80402367	005
		nedre venster	80402374	005
		nedre höger	80402381	005
18.	Kontrollenhetsram		80306781	015
19.	Fot		80413655	005
20.	Nätströmbrytare		52003134	012
21.	Tryckknap för nätströmbrytare		80409202	006
22.	Lucka		80434146	011
23.	Högtalargaller	28"	81202070	022
		25"	81202063	022
24.	Täcke	28"	80302003	011
		25"	80302010	011
25.	Låsstycke		80413473	006

MEKAANISET OSAT 5025, -28E

Viite	Osa/arvo		Til.no.	HR
1.	Kotelo	28" musta	82003222	047
		25" musta	82002229	046
2.	Kuvaputki A66ECY13x01 MP	28"	46002897	059
	Kuvaputki A59ECY13x01	25"	46002880	059
3.	Kuvaputken kiinnitysruuvi		63017126	003
4.	Demagnetointikela	28 "	93030032	026
		25"	93020035	026
5.	Demagnetointikelan pidin		80424126	003
6.	Demagnetointikelan pidin		80403115	003
7.	Demagnetointikelan pidin		80424133	003
8.	Takaseinän kiinitysosa		80409226	004
9.	Takaseinä	28" musta	82402114	032
		25" musta	82402107	032
10.	Takaseinän kiinnitysruuvi		62039222	003
11.	Takapeitelevy	1 scart	80307522	006
12.	Kosketus suoja		80307205	006
13.	Kojeiston kinnikepari	25"	80307073	010
		28"	80307066	010
14.	Kaiuttimen kiinnitysjousi		54040786	003
15.	Laajakaistakaiutin		33004396	026
16.	Vedonpoistaja		00103671	005
17.	Kuvaputken kiinnityskappale	vasen ylä	80402350	005
		oikea ylä	80402367	005
		vasen ala	80402374	005
		oikea ala	80402381	005
18.	Säätöyksikön runko		80306781	015
19.	Jalka		80413655	005
20.	Verkkokytkin		52003134	012
21.	Verkkokytkimen nuppi		80409202	006
22.	Luukku		80434146	011
23.	Kaiutinritilä	28"	81202070	022
		25"	81202063	022
24.	Kaiutinritilän suojus	28"	80302003	011
		25"	80302010	011
25.	Lukituskappale		80413473	006



GRID REFERENCES OF THE MAIN BOARD

Ca1	E8	Ck4	G6	Dh1	F2/3	Ra62	G7	Rp16	C9	Rz24	H7
Ca9	B7	Ck6	G4	Dk1	G4/5	Ra63	F8	Ru1	H6/7	Rz25	I10
Ca15	E8	Ck7	F4	Dk2	G4	Ra64	F8	Ru2	I6	Rz26	K7
Ca17	F10	Ck8	G4	Dp1	C8	Ra65	G6/7	Ru3	I6	Rz27	K7
Ca18	F7	Ck9	G6	Dp2	C8	Ra66	G8/7	Ru6	J5	Rz29	J6
Ca19	F7/8	Ck11	G3	Du1	I5	Ra67	F9	Ru7	J5	Rz30	J8
Ca20	F7	Ck12	G3	Du2	H3	Ra68	H6	Ru8	L3	Rz31	J6
Ca21	F7	Cu1	J5	Du3	I3	Ra73	G9	Ru9	L4	Rz32	K6/7
Ca22	G6	Cu3	I5	Du4	H3	Ra77	C4/5	Ru11	L3	Rz33	K6
Ca25	G10	Cu4	H4	Du7	L4	Ra87	D4	Ru12	L3	Rz34	I4
Ca26	B7	Cu6	H3	Du8	L3	Rd6	B7/8	Ru13	K2	Rz36	I5
Ca27	C5	Cu7	H3	Du9	L3	Rd7	C9/8	Ru14	L1/2		
Ca29	D5/4	Cu8	I4	Du11	K1	Rd13	C8	Ru16	L1/2	Ta11	F9
Ca33	D4	Cu9	I3	Du12	I2	Rd14	D6/5	Ru17	L2	Ta12	G9
Cd1	B8	Cu11	I3	Du13	I2	Rd16	D6/5	Ru18	L1	Ta13	F8
Cd9	D8	Cu12	I4	Du14	I1	Rd21	B4/5	Ru19	L2	Ta14	G7
Cd19	D6/7	Cu13	I3	Du15	I1	Rd22	B4/5	Ru21	K/L3	Ta16	F7
Cd21	D6/7	Cu14	I3	Du16	K6	Re2	E3/2	Ru22	K/L2	Ta17	G10
Cd24	D6/7	Cu16	K5	Du17	K6	Re3	E3/2	Ru23	K/L2	Ta18	F8
Cd26	D6/7	Cu17	I4/5	Dz1	H7	Re6	E3/2	Ru24	K/L2	Te13	C4
Ce2	E1	Cu18	H7	Dz2	H/I5	Re8	E1	Ru26	K/L2	Te16	A2
Ce13	D2	Cu21	K/L3	Dz3	I10	Re12	D2/3	Ru27	L1	Tk1	G5
Ce14	D2	Cu22	K/L4	Dz4	H7	Re22	D3	Ru28	L1	Tk2	G5/4
Ce18	D1	Cu23	L2	Dz7	G7	Re23	D3	Ru29	K1	Tp1	D9
Ce19	D1	Cu23	K/L2	Dz8	G/H9	Re31	C/D3	Ru31	K1	Tp2	D9
Ce30	C2	Cu24	K2	Dz11	J10	Re38	C1	Ru32	J1	Tu1	L4
Ce49	B4	Cu26	K1	Dz12	J9	Re41	B1/2	Ru33	J1	Tu2	K6
Ce51	B3	Cu27	L1	Dz13	K7	Re43	B3/4	Ru34	J2	Tu3	K6
Ce52	A4	Cu28	L2	Dz14	J7	Re44	B3/4	Ru35	I1	Tu4	J/K6
Ce54	A3/4	Cu29	L1	Dz16	J8	Re56	A1/2	Ru36	I1	Tz1	G10
Ce56	A3/4	Cu31	L2	Dz17	F7	Re57	F6	Ru37	K6	Tz3	I10
Ce57	A3	Cu33	K3			Rf1	A8	Ru38	L6	Tz4	K7
Ce58	A3	Cu34	J1	ICa1	B6/5	Rf2	A8	Ru39	J6	Tz6	K6
Ce63	B2	Cu35	G2	ICa2	A5	Rf7	A8	Ru41	J5	Tz7	J6/7
Ce67	B1	Cu36	J2	ICa3	F7/8	Rf8	A7	Ru42	K6	Tz8	K6
Ce68	B1	Cu37	I2	ICd2	D6	Rh9	E/F2	Ru43	K5		
Ce78	A2	Cu38	J1	ICd3	C/D7	Rh12	F2	Ru44	K6	La1	E8
Cf2	B9	Cu39	I1	ICd4	B7	Rh18	F3	Ru45	G2	La2	C5
Cf3	A8	Cu41	I2	ICe1	E2/1	Rh19	F2/3	Ru46	K5	La3	C5
Cf6	B9	Cu42	G2	ICe2	D2	Rh24	C/D4	Ru47	K6	La4	G7
Cf7	A9	Cu43	G1	ICe3	B/C1	Rh26	E4	Ru48	K5	La5	E9
Cf8	A9/10	Cu44	H1	ICe4	A/B3	Rh27	E4	Ru49	K6	Le1	C2
Cf9	B10	Cz1	H6	ICe5	A/B1	Rh28	F3	Ru51	G/H7	Le2	D3
Cf13	A10	Cz2	H5	ICh1	F2	Rh29	G3	Ru52	K5	Le3	C3
Cp1	D10	Cz3	H7	ICh2	F3/4	Rh33	F5	Ru53	K5	Le4	C2/3
Cp2	D8	Cz4	H7	ICk1	F/G5	Rh37	G3	Ru54	H5	Le5	C3
Cp3	B8/9	Cz6	H4/5	ICp1	B8/9	Rk4	F5	Rz1	H6	Lf1	A8
Cp4	D10	Cz7	G8/9	ICu1	K/L5	Rk6	F6	Rz2	H6	Lf2	A8
Cp6	C10	Cz8	G9	ICu2	L2	Rk7	F6	Rz3	H6	Lf3	A9
Cp11	D9	Cz9	G9	ICu3	K6	Rk8	F6	Rz4	I7	Lf4	A9/10
Cp12	C10	Cz10	F9	ICu4	K6	Rk9	G5	Rz5	H6	Lu1	I7
Cp14	C8	Cz11	H10			Rk11	G5	Rz6	I10	Lu2	K3
Cp16	B8	Cz12	G6	Ra0	G10	Rk12	H4	Rz7	I6	Lu3	I4/5
Cp17	C9	Cz13	I7	Ra1	E10	Rk13	H4	Rz8	G7/8	Lu4	K/L4
Ch3	F1	Cz14	J10	Ra3	E8	Rk14	G5/4	Rz9	G8	Lu5	K4
Ch4	F1	Cz15	H/I9	Ra20	E8	Rk16	G3	Rz10	H5/6	Lz1	J6/7
Ch6	F1	Cz16	I9	Ra22	B4	Rk26	H3	Rz11	G9	Lz2	J7
Ch7	F2	Cz17	J6	Ra27	B/C6	Rk36	G/H5	Rz12	G9		
Ch8	F2/3	Cz18	J8/9	Ra28	B/C6	Rk37	G/H4	Rz15	H/I5	ZDa1	F10
Ch12	E2	Cz19	K6	Ra29	B/C6	Rk38	G/H4	Rz16	H9	ZDa2	G6
Ch19	F4	Cz20	I/H5	Ra54	F9	Rk39	G5	Rz17	H10	ZDe1	E1
Ch21	F3	Cz21	J6	Ra56	F8	Rk41	G3	Rz18	H9	ZDe2	A/B3
Ch22	F4	Cz25	G6	Ra57	F7/8	Rk42	G3	Rz19	H10	ZDe3	A/B2
Ch23	F4	Cz26	J8	Ra58	G8	Rk43	G3	Rz20	G6/7	ZDe6	B1
Ck1	F6			Ra59	G8	Rp7	D9	Rz21	H10	ZDu1	K5
Ck2	F5	Dd1	C8	Ra60	F8/9	Rp8	D8	Rz22	H10	ZDz1	G/H9
Ck3	H4	De11	C4/5	Ra61	G7	Rp14	D9	Rz23	H10		

GRID REFERENCES OF THE MAIN BOARD

Xa1	A/B6
Xd1	D6
Xe1	D1
Xe2	D1
Fe1	D3
Fe2	C3
Mz1	G10/9
Mz2	I8
Mu1	J3/4
PTCu1	H1/2
Pe1	C1/2
Pu1	I6
Pu2	J5
Su1	I3
Su2	I3
Su3	J2
LMs1	L6/7
LMs2	K8
LMs3	L8/9
RMs1	K9
RMs2	L8/9
SMs1	K10
CMs1	L8
CMs2	L6

CONNECTORS

AB1	F10
AB2	F5/6
AF	B4
AI1	E4
AI2	E7/6
AS	G8
BS1	C7/6
BS2	C7
BS3	C7
BS4	C8
CAM	E2
EARTH	G2
EG	A4/3
EL	E1
ETX	B2/3
FA	B10
KDY	G/H3
PC1	I7
PC2	H5
PC3	H7
PC4	H4
PL	D6/5
PR	C5/6
RGB	A2
RS	D/E7
SERVICE	A4/5
SP	C10
Z CRT	G/H5
Z DY	J9
Z	H6
U DEM	H1

CIP

COMPONENTS

ra2	E8
ra4	E7/8
ra5	E/F8
ra6	E7/8
ra7	E7/8
ra8	B6
ra9	B6
ra10	B6
ra11	B4/5
ra12	C4
ra14	B5
ra15	B5
ra16	B5
ra17	B4
ra18	B5
ra19	A4
ra21	A4/5
ra23	B5
ra24	B6
ra25	B7
ra26	B6
ra31	B5
ra32	B5
ra35	B5
ra36	A4
ra37	A4
ra38	B5
ra39	B/C6
ra40	C6/7
ra41	C6
ra43	B5
ra45	C6
ra48	C5
ra55	F9
ra69	G9
ra71	F7
ra74	C5
ra76	B/C5
ra78	C4
ra79	C5/4
ra81	C4
ra82	D4
ra83	E5
ra84	D5
ra86	D4/5
ra88	D4
rd1	B/C7
rd2	B7
rd3	B7/8
rd4	B7/8
rd8	D/E7
rd9	D7
rd11	C8
rd12	C7
re1	E2
re4	E1
re5	E2
re7	E1
re9	E1
re10	F1
re11	D2

re13	D3
re14	D2
re15	E2
re17	D3
re18	D2
re20	E1
re24	D3
re25	C3
re26	C3/4
re27	C3
re28	C3
re29	C3
re32	C3
re33	C3
re34	C2
re35	D3
re36	C2
re37	C4
re39	B1
re40	C5
re42	C1/2
re45	A4
re46	B3
re47	A3
re48	A3
re49	A3
re50	C1
re51	A3
re54	A2
re55	C1
re58	B3
re60	A2
re61	B2
re62	B2
re63	B2
re64	B2
re66	B2
re67	A2
re68	A2
re69	B2
re71	A2
re72	A2
re73	A1
re74	A1
re76	B1
re77	A1
re78	A4
re79	A2/3
rf4	A10
rf6	A10
rf9	A8
rf11	A8/9
rf12	A9
rf13	A9/10
rh1	F3/2
rh2	F2
rh3	F2
rh4	F2
rh6	F2
rh8	F2
rh10	F3
rh11	E2
rh13	F2
rh14	F2
rh16	F1/2

rh17	F3/2
rh21	F3/2
rh22	F2/3
rh23	F3/2
rh30	F3
rh31	F3
rh32	F3
rh34	F4/3
rh36	F5
rh38	F6
rk1	F4/5
rk2	F5
rk3	F5
rk44	G5
rk46	G5
rk47	G5
rk48	G5
rk49	G6
rk51	G4
rp1	D9/10
rp2	D10
rp3	D10
rp4	D9/10
rp6	E9
rp11	B8
rp12	B9
rp13	C8
rp17	D9
rp18	D10
ru40	G1
rz13	G9/10
rz14	G9
ca2	B6
ca4	B6
ca7	B6
ca8	B5
ca10	C5/6
ca11	B5
ca12	A5
ca13	B7/6
ca14	B7
ca28	C4
ca31	D5
ca32	D5
ca34	D4/3
cd2	C/D7
cd3	D7
cd4	D7
cd6	D7
cd7	D7
cd8	C7
cd11	D7
cd13	D7
cd14	D7
cd16	D7
cd17	B8
cd18	B9
cd22	E6
cd23	E6
ce1	E2
ce3	E1/2
ce6	D2
ce7	D2
ce8	D3

ce11	D2
ce12	D2
ce15	D2
ce16	D2
ce17	D2
ce21	D2
ce22	D1
ce23	C3
ce24	C3
ce26	C3
ce27	B2
ce28	C2/3
ce29	C2
ce31	C2
ce32	C2
ce33	C2
ce34	C2
ce36	C2
ce37	C1/2
ce38	C1/2
ce39	C1
ce40	C1/2
ce41	C1
ce42	C1
ce43	C1
ce44	C1
ce45	C1/2
ce46	B1
ce47	B1
ce48	C1
ce53	A/B3
ce55	A/B3
ce59	A2
ce61	A2
ce62	A2
ce64	A2
ce65	A1
ce66	A2
ce69	B1
ce70	B2
ce71	B/A1
ce72	A/B1
ce73	A1
ce74	A1
ce75	A3
ce76	E1
ce77	E1
ce79	E2
ce81	E2
ce82	E2
ce83	E1
cf1	B10
cf4	B10
ch1	F2
ch2	F2
ch9	F3/2
ch11	F2/3
ch13	F3
ch14	F3
ch16	E3
ch17	F4/3
ch18	F4/3
ch24	F4/3
ch26	F4/3
cp7	D9/8

cp8	C10
cp9	D9
cp13	C10
da1	A/B6
da3	C4
de2	D2/3
de3	D3
de4	D3
de6	C3
de7	C3
de8	A3
de9	B3
dh2	F3
dk3	G5
ta1	B6
ta2	B/C6
ta10	G9
ta19	B5
ta20	D4/5
ta21	D4/5
te1	D2/3
te3	C3
te4	C3
te6	C/D3
te7	C3
te9	D4/3
te11	B2
te12	B2
te14	A2/3
te15	A2
tf1	A10
tf2	A9
th1	F3
tk3	G5
tk4	G6
tp3	D10
ja1	C/D4
ja5	G8
ja10	B5/6
ja15	B4
je10	E2
jh5	G3/2
u32	B6
u33	I10
u36	F8
ica4	C4

MAIN BOARD AB

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arVo	Til.no.	HR

RF block

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Ca 01 09	10u		63V	25054062	005
Ca 02 04 14	47n	20%	50V SMD	23066825	005
Ca 07 08	27p	5%	50V SMD	23061205	005
Ca 11 12	100n	20%	50V SMD	23067004	005
Ca 15 17 19 20 22 25	100n	10%	63V	24031309	005
Ca 18	100n	10%	63V	24031309	005
Ca 21 26	100u		25V	25053434	005
Ca 27	4u7		63V	25054048	005
Ca 28	1n2	5%	50V SMD	23062044	005
Ca 29	1u		63V	25054000	005
Ca 31 32	100n	20%	50V SMD	23067004	005
Ca 33	220n	10%	63V	24031505	005
Ca 34	1n	10%	50V SMD	23062001	005
Cd 01 09	100u		25V	25053434	005
Cd 02 03	15n	10%	50V SMD	23062584	005
Cd 04 13	3n3	10%	50V SMD	23062245	005
Cd 06 14	33n	20%	50V SMD	23066741	005
Cd 07 08 11 16	4n7	10%	50V SMD	23062324	005
Cd 12	1000u		16V	25024511	005
Cd 17 18	1n	10%	50V SMD	23062001	005
Cd 19 21	220n	10%	63V	24031505	005
Cd 22 23	100n	20%	50V SMD	23067004	005
Cd 24 26	470n	10%	63V	24031701	005
Ce 01 03 15 17 32 33 38 39 62 65	100n	20%	50V SMD	23067004	005
Ce 02	100u		25V	25053434	005
Ce 06 07	22p	5%	50V SMD	23061167	005
Ce 08	330p	5%	50V SMD	23061745	005
Ce 11 27	220p	5%	50V SMD	23061669	005
Ce 12	270p	5%	50V SMD	23061700	005
Ce 13 14 54 63	330n	10%	63V	24031608	005
Ce 16 47 48	47n	20%	50V SMD	23066825	005
Ce 19	6/30p		160V	27062007	006
Ce 21 22 23	22n	20%	50V SMD	23066662	005
Ce 24	100p	5%	50V SMD	23061507	005
Ce 26 40 45	47p	5%	50V SMD	23061322	005
Ce 28	68p	5%	50V SMD	23061400	005
Ce 30	220u		16V	25023419	005
Ce 31 43 44 46 55 59 61 70	10n	20%	50V SMD	23066501	005
Ce 34 37	15p	5%	50V SMD	23061088	005
Ce 36 41 42	180p	5%	50V SMD	23061627	005
Ce 49 51 52	470n	10%	63V	24031701	005
Ce 53	1n	10%	50V SMD	23062001	005
Ce 56	1u		63V	25054000	005
Ce 57	4u7		63V	25054048	005
Ce 58	22u		35V	25053599	005
Ce 64	150p	5%	50V SMD	23061581	005
Ce 66	120p	5%	50V	23061541	005
Ce 67 68	100n	10%	63V	24031309	005
Ce 69 71	100p	5%	50V SMD	23061507	005
Ce 72 73 74	330p	5%	50V SMD	23061745	005
Ce 76 77 78 79 81 82	390p	5%	50V SMD	23071783	005
Ce 78	10u		63V	25054062	005
Cp 01 16	100u		25V	25053434	005
Cp 02	3300u		35V	25044106	008
Cp 03 06 12	100n	10%	63V	24031309	005
Cp 04 11	1000u		25V	25034707	006
Cp 07 09	22n	20%	50V SMD	23066662	005
Cp 08 13	10n	20%	50V SMD	23066501	005
Cp 14 17	1u		63V	25054000	005

DIODES / DIODEN / DIODER / DIODIT

Da 01	BAS 16	SMD	41006032	003
Da 03	BAS 16	SMD	41006032	003
Dd 01	1N 4148		41004481	002
De 02 08 09	BAS 16	SMD	41006032	003
De 03	BAT 18	SMD	41006121	006
De 04	BAV 70	SMD	41006018	004
De 06 07	BAT 18	SMD	41006121	006
De 11	1N 4148		41004481	002
Dp 01 02	1N 4148		41004481	002

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

Granada 44002752

ICa 01	SDA 20320		44002721	032
ICa 02	SDA 2586			017
ICa 03	MC 78L12ACP		43000139	006
ICa04	4013	SMD	44004048	006
ICd 02	TDA 8415		43003301	020
ICd 03	TDA 8421		43004214	027
ICd 04	TL 082 CP		43003576	016
ICe 01	TEA 6415		43001970	010
ICe 02	TDA 4650		43002986	015
ICe 03	TDA 4660		43002979	010
ICe 04	TDA 4680		43003260	020
ICe 05	TDA 4565		43003198	015
ICk 01	TDA 3654		43003174	016
ICp 01	TDA 1521		43002395	012

COILS / SPULEN / SPOLAR / KELAT

La 01 05	10uB78108T1103K9	31300377	006
La 02 03	6u8 B78108S1682K	31300401	006
La 04	8u Salcomp FJ 0149	31300212	006
Le 01 02	K7332 HM	31000426	006
Le 03	10uB78108T1103K9	31300377	006
Le 04 05	15u B78108S1153K	31300418	006
Lp 01 02	15-33	93002338	005

POTENTIOMETER / POTENTIOMETERN / POTENTIOMETRAR / SÄÄTÖVASTUKSET

Pe 01	1k0	20%	100mW	15114802	006

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Ja 01 05 10 15	0R		0,125W SMD	12820000	003
Je 10	0R		0,125W SMD	12820000	003
Jh 03	0R		0,125W SMD	12820000	003
Ra 01 87	470R	5%	0,25W	12114104	003
Ra 02	15k	5%	0,125W SMD	12830220	003
Ra 03	10k	5%	0,25W	12117307	003
Ra 04 14 15 39 40 41 45	47k	5%	0,125W SMD	12830943	003
Ra 05 36 37 55	4k7	5%	0,125W SMD	12828940	003
Ra 06 07	220R	5%	0,125W SMD	12826447	003
Ra 08 09 10 11 26 35	10k	5%	0,125W SMD	12830000	003
Ra 12	330R	5%	0,125W SMD	12826715	003
Ra 14	150k	5%	0,125W SMD	12832225	003
Ra 16	27k	5%	0,125W SMD	12830581	003
Ra 17	47R	5%	0,125W SMD	12824944	003
Ra 18 25 32	470R	5%	0,125W SMD	12826942	003
Ra 19 21	270R	5%	0,125W SMD	12826588	003
Ra 22 54	220R	5%	0,25W	12113301	003
Ra 23	220R	5%	0,125W SMD	12826447	003
Ra 27 28 29	330R	5%	0,25W	12113703	003
Ra 31	100R	5%	0,125W SMD	12826007	003
Ra 43 48	1k0	5%	0,125W SMD	12828005	003
Ra 56	1k2	5%	0,25W	12115103	003
Ra 57	47R	5%	0,25W	12111705	003
Ra 58	1R5	10%	0,4W	13100155	005
Ra 59	R68	5%	0,25W FP	12600223	003
Ra 60	10R	5%	0,25W FP	12600508	003
Ra 61 62	2R2	5%	4W	13230551	003
Ra 63 64	12k	5%	0,25W	12117503	003
Ra 65	100k	5%	0,25W FP	12601480	003
Ra 66	33k	5%	0,25W	12118502	003
Ra 67	470R	5%	0,25W FP	12600900	003
Ra 68	8k2	5%	0,25W	12117101	003
Ra 69	120k	5%	0,125W SMD	12832097	003
Ra 73	R1		0,4W	13100014	003
Ra 74	47k	5%	0,125W SMD	12830943	003
Ra 76	22k	5%	0,125W SMD	12830440	003
Ra 77	4k7	5%	0,25W	12116504	003
Ra 78	68k	5%	0,125W SMD	12831187	003
Ra 79	100k	5%	0,125W SMD	12832008	003
Ra 81 88	1k0	5%	0,125W SMD	12828005	003
Ra 83	33k	5%	0,125W SMD	12830712	003
Ra 82	4k7	5%	0,125W SMD	12828940	003
Ra 86	820k	5%	0,125W SMD	12833290	003
Rd 01 03	10k	5%	0,125W SMD	12830000	005
Rd 02 04	100k	5%	0,125W SMD	12832008	003
Rd 06 07	1k0	5%	0,25W	12114908	003
Rd 08 09	330R	5%	0,125W SMD	12826715	003
Rd 11 12	1k0	5%	0,125W SMD	12828005	003
Rd 13	15R	5%	0,25W FP	12600546	003
Rd 14 16	100R	5%	0,25W	12112508	003
Rd 21 22	47R	5%	0,25W	12111705	003
Re 01 13 76	1k0	5%	0,125W SMD	12828005	003

Re 02 03 43 44	270R	5%	0,25W	12113507	003
Re 04 05 07 09 15 20	10R	5%	0,125W SMD	12824004	003
Re 06	820R	5%	0,25W	12114702	003
Re 08	47R	5%	0,25W FP	12600663	003
Re 10	68R	5%	0,125W SMD	12825181	003
Re 11 14 29 49 72	3k3	5%	0,125W SMD	12828713	003
Re 12 22	3k3	5%	0,25W	12116102	003
Re 16 33 39	10k	5%	0,125W SMD	12830000	003
Re 17	4k7	5%	0,125W SMD	12828940	003
Re 23	22k	5%	0,25W	12118100	003
Re 24	10k	5%	0,125W SMD	12830000	003
Re 25	56R	5%	0,125W SMD	12825063	003
Re 26	1k8	5%	0,125W SMD	12828335	003
Re 27	47k	5%	0,125W SMD	12830943	003
Re 28 49 58 63 79	4k7	5%	0,125W SMD	12828940	003
Re 31	560R	5%	0,25W FP	12600924	003
Re 32 69	1k5	5%	0,125W SMD	12828225	003
Re 34 78	470R	5%	0,125W SMD	12826942	003
Re 35	330R	5%	0,125W SMD	12826715	003
Re 36	390R	5%	0,125W SMD	12826825	003
Re 38	10k	5%	0,25W	12117307	003
Re 40 62	22k	5%	0,125W SMD	12830440	003
Re 41	330R	5%	0,25W	12113703	003
Re 42	1M0	5%	0,125W SMD	12834001	003
Re 46 47 48 77	100R	5%	0,125W SMD	12826007	003
Re 50 55	270R	5%	0,125W SMD	12826588	003
Re 51	82k	5%	0,125W SMD	12831295	003
Re 54 56	22R	5%	0,25W FP	12600584	003
Re 57	47k	5%	0,25W FP	12601387	003
Re 61 68 71	560R	5%	0,125W SMD	12827061	003
Re 64	100k	5%	0,125W SMD	12832008	003
Re 66	2k2	5%	0,125W SMD	12828441	003
Re 67	1k2	5%	0,125W SMD	12828098	003
Re 73 74	47R	5%	0,125W SMD	12824944	003
Re 84	2k2	5%	0,125W SMD	12828441	003
Rp 01 02 03 04 06	10k	5%	0,125W SMD	12830000	003
Rp 01	100k	5%	0,125W SMD	12832008	003
Rp 07 14 16	8R2	5%	0,25W FP	12600481	003
Rp 08	2R2	5%	4W	13230067	005
Rp 11 12 13	1k5	5%	0,125W SMD	12828225	003
Rp 17 18	4k7	5%	0,125W SMD	12828940	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Ta 01 02 10	BC 847 B	SMD	42105018	004
Ta 1117	2SD 2012		42401186	004
Ta 13	BC 327-25	45V 1,0 A	42103288	007
Ta 16 18	BC 557 B		42155717	004
Ta 19 20	BC 847 B	SMD	42105018	004
Ta 21	BC 857 B	SMD	42105032	004
Te 01 03 11 12 14 15	BC 847 B	SMD	42105018	004
Te 02 04	BC 857 B	SMD	42105032	004
Te 06 07 09	BC 857 B	SMD	42105032	004
Te 13	BC 557 B		42155717	004
Tp 01	2SD 2012		42401186	004
Tp 02	BC 327-25	45V 1,0 A	42103288	007
Tp 03	BC 847 B	SMD	42105018	004

CRYSTALS / QUARZE / KRISTALLER / KITEET

XFa 01	8,867 MHz	48004446	010
XFe 02	8,867 MHz	48004446	010
XFd 01	10,000 MHz	48004632	010

ZENERDIODES / ZENERDIODEN / ZENERDIODER / ZENERDIODIT

ZDa 01	BZX 79B 5V62%	400mW	41003334	003
ZDa 02	BZX 83B 302%	400mW	41003358	003
ZDe 01	BZX 79C 105%	400mW	41003080	003
ZDe 02 03	BZX 83C 8V25%	400mW	41003107	003
ZDe 06	BZX 83C 5V65%	400mW	41003028	003

FILTERS / FILTER / FILTER / SUODATTIMET

Fe 02	EFC-S4R43MW3	31200367	010

SUBMODULE / SUBMODUL / SUBMODUL / ALIMODULI

MTx 04	Tuner Orega 50819810014	53010676	044

Power supply block

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Ch 01	150p	5%	50V SMD	23061581	005
Ch 02 09 16	100n	20%	50V SMD	23067004	005
Ch 03	2u2		63V	25054024	005
Ch 04 06	22u		35V	25053599	005
Ch 07	100n	10%	63V	24031309	005
Ch 08	2n7	1%	63V	22212261	006
Ch 11 17 18	10n	20%	50V SMD	23066501	005
Ch 12	220u		16V	25023419	005
Ch 13	330p	5%	50V SMD	23061745	005
Ch 14 24	2n2	20%	50V SMD	23066167	005
Ch 19	68n	10%	63V	24034705	005
Ch 21	10n	5%	63V	24030719	005
Ch 22	150n	10%	63V	24031402	005
Ch 23	470n	10%	63V	24031701	005
Ch 26	1n	10%	50V SMD	23062001	009
Ck 01	22u		35V	25053599	005
Ck 02	270p	5%	63V	23030246	005
Ck 03	100n	10%	63V	24035123	005
Ck 04	2200u		25V	25034927	005
Ck 06	470u		40V	25044003	005
Ck 07	100u		35V	25043004	005
Ck 08	2n2	10%	100V	24048512	005
Ck 09	10u		63V	25054062	005
Ck 12	330n	10%	63V	24031608	005
Cu 01	330p	10%	1600V	22208129	005
Cu 03	100n	10%	250V	24061946	005
Cu 04 08	470u		40V	25044003	005
Cu 06 09 13 27 28	100n	10%	63V	24031309	005
Cu 07 11 14	330p	20%	500V	23143614	005
Cu 12	1000u		16V	25024528	006
Cu 16 26 31	1u		63V	25054000	005
Cu 17	47u		250V	25063606	008
Cu 18	470n	10%	250V	24064118	005
Cu 21	33n	5%	1000V	22209985	006
Cu 22	220p	5%	1600V	22208105	005
Cu 23	47u		16V	25053111	005
Cu 24	5n6	5%	160V	22163101	005
Cu 29	100p	5%	63V	23030198	005
Cu 32	6n8	5%	63V	22212508	004
Cu 33	10n	5%	400V	24073006	005
Cu 34	220u	20%	385V	25080854	005
Cu 36 37 38 39	3n3	20%	1kV	23977608	006
Cu 41	1n5	20%	400V	23655205	005
Cu 42 43	2n7	20%	400V	23655243	005
Cu 44	220n	10%	400V	24075705	005
Cz 01	100n	10%	250V	24061946	005
Cz 02	4u7		250V	25063204	006
Cz 03 19	2n2		250V	23642919	005
Cz 04 11	330p	20%	500V	23143614	005
Cz 05	330n	10%	63V	24031608	005
Cz 06	2200u		40V	25044900	005
Cz 07	100u		35V	25043004	005
Cz 08	220n	10%	63V	24031505	005
Cz 09	56p	5%	63V	23030167	005
Cz 10	150p	20%	500V	23143502	005
Cz 12 21	220n	10%	100V	24053318	005
Cz 13	470n	10%	250V	24064118	005
Cz 14	5n6	5%	1000V	22191503	005
Cz 15	1n0	3,5%	1600V	22208199	005
Cz 16	10n	3,5%	1600V	22201162	005
Cz 17	150n	5%	250V	22171247	005
Cz 18	390n	5%	250V	22171508	005
Cz 20	6n8	20%	400V	22176601	005

DIODES / DIODEN / DIODER / DIODIT

Dh 01	1N 4148		41004481	002
Dh 02	BAS 16	SMD	41006032	003
Dk 01	1N 4007	1000V 1A	41004072	003
Dk 02	1N 4148		41004481	002
Dk 03	BAV 99	SMD	41006070	003
Du 01	BY500	800V 5A	41002270	005
Du 02 03	BYW 98-200		41005277	005
Du 04	BYS 27-45		41005208	007
Du 07	BYV 36C		41005215	005
Du 08 11 16 17	1N 4148		41004481	002
Du 12 13 14 15	BY 527		41002249	002
Dz 01	BYV 26C		41005239	005
Dz 02 03 13 14	BYV 36C		41005215	005
Dz 04 07	1N 4007	1000V 1A	41004072	003
Dz 08	1N 4148		41004481	002
Dz 11	BYR29F-800		41002586	008
Dz 12	BY 228		41002256	006

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICh 01	TDA 2579A	43003246	015
ICh 02	TDA 8433	43004331	019
ICu 01	CNW 82	44003084	006
ICu 02	TDA 4605	43003318	011
ICu 03 04	TL 431	43003617	007

COILS / SPULEN / SPOLAR / KELAT

Lu 01	Salc FJ1311	34002892	007
Lu 02	4u7Sie 78138S1472K	31300511	006
Lu 03 04 05	Phi 4330 030 38771	31303312	005
Lz 01	9mH Salc FJ1368	34002940	008
Lz 02	Salc FJ1375	34002971	008
Lz 03	Vogt 5920708200	34002933	008

TRANSFORMERS / TRANSFORMATOREN / TRANSFORMATORER / MUUNTAJAT

Mu 01	SMT 401551 Mains transformer	31300858	023
Mz 01	Orega 83610	31300542	013
Mz 02	Orega 473175 DST	34000911	033

POTENTIOMETERS / POTENTIOMETERN / POTENTIOMETRAR / SÄÄTÖVASTUKSET

Pu 02	470R	20%	100mW	15114314	006

PTC-RESISTORS / PTC-WIDERSTÄNDE / PTC-MOTSTÅND / PTC-VASTUKSET

PTCu 01	Phi 2322 662 96116	16111237	010

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rh 01	15k	5%	0,125W SMD	12830220	003
Rh 02	22k	5%	0.125W SMD	12830440	003
Rh 03 21	100k	5%	0,125W SMD	12832008	003
Rh 04 31	10k	5%	0,125W SMD	12830000	003
Rh 06 16 23	1k0	5%	0,125W SMD	12828005	003
Rh 08	3k3	5%	0.125W SMD	12828713	003
Rh 09 37	1k0	5%	0,25W SMD	12114908	003
Rh 10	33k	5%	0,125W SMD	12830712	003
Rh 11	2k2	5%	0,125W SMD	12828441	003
Rh 12	330R	5%	0,25W	12113703	003
Rh 13	6k8	5%	0,125W SMD	12829187	003
Rh 14	22R	5%	0,125W SMD	12824448	003
Rh 17	33k2	1%	0,125W SMD	12830729	003
Rh 18	470k	5%	0,25W	12121300	003
Rh 19	100k	1%	0,4W	13161009	003
Rh 22	470R	5%	0,125W SMD	12826942	003
Rh 24	680R	5%	0,25W	12114506	003
Rh 26 27	270R	5%	0,25W	12113507	003
Rh 28	470R	5%	0,25W	12114104	003
Rh 30	47k	5%	0,125W SMD	12830943	003
Rh 32	68k	5%	0,125W SMD	12831187	003
Rh 33	82k	5%	0,25W	12119501	003
Rh 34	27k	5%	0,125W SMD	12830581	003
Rh 36	120k	5%	0,125W SMD	12832097	003
Rh 38	470k	5%	0,125W SMD	12832942	003
Rk 01	1k0	5%	0,125W SMD	12828005	003
Rk 02 03	5k6	5%	0,125W SMD	12829061	003
Rk 04	10k	5%	0,25W	12117307	003
Rk 06	6k2	5%	0,25W	12116800	003
Rk 07	820R	5%	0,25W	12114702	003
Rk 08	470R	5%	0,25W	12114104	003
Rk 09	2R2	5%	0,25W	12108505	003
Rk 11	1R8	5%	0,25W	12108309	003
Rk 12 13	1k0	5%	0,25W FP	12600986	003
Rk 14	220R	5%	0,25W	12113301	003
Rk 36	1R5	10%	0,4W	13100155	003
Rk 37 38	1k0	5%	0,25W	12114908	003
Rk 39	22R	5%	0,25W FP	12600584	003
Rk 41	18k	5%	0,25W FP	12601284	003
Rk 42	39k	5%	0,25W FP	12601363	003
Rk 43	220R	5%	0,25W FP	12600821	003
Rk 44	100R	5%	0,125W SMD	12826007	003
Rk 46	100k	5%	0,125W SMD	12832008	003
Rk 47	47k	5%	0,125W SMD	12830943	003
Rk 48 51	10k	5%	0,125W SMD	12830000	003
Rk 49	470R	5%	0,125W SMD	12826942	003
Ru 01 02	8k2	5%	0,25W	12117101	003
Ru 03	220R	5%	4W	13232559	003
Ru 05	1R0	5%	0,5W	13100052	003
Ru 06 07	62R	5%	0,25W FP	12600694	003
Ru 08	33k	10%	9W	14125710	003
Ru 09	4k7	5%	0,25W	12601143	003
Ru 12	15R	5%	0,25W	12110500	003
Ru 13	47R	5%	2,0W	13219819	003
Ru 14 53	10k	5%	0,25W	12117307	003
Ru 16 44 49	10k	5%	0,25W FP	12601222	003
Ru 17	3k3	5%	0,25W	12116102	003
Ru 18	24k	5%	0,25W FP	12601318	003
Ru 19	220R	5%	0,25W FP	12600821	003
Ru 21	4k32	1%	0,4W	13144320	003
Ru 22 23	374k	1%	0,4W	13163742	003
Ru 24	150k	1%	0,4W	13161503	003
Ru 26	120k	1%	0,4W	13161201	003
Ru 27 31	12k	5%	0,25W	12117503	003
Ru 28 29	12k	5%	0,25W FP	12601246	003
Ru 32 33	180k	5%	0,25W FP	12601545	003
Ru 34	10M		0,5W	12226016	003
Ru 35 36	1R5	5%	4W	14087616	005
Ru 37 38	150R	5%	0,25W FP	12600780	003
Ru 39	100k	1%	0,4W	13161009	003
Ru 41	1k47	1%	0,4W	13141477	003
Ru 42 47	100k	5%	0,25W FP	12601480	003
Ru 43	8k2	1,5%	0,4W	13148203	003
Ru 46 52	1k5	5%	0,25W FP	12601026	003
Ru 48	750R	1%	0,4W	13137502	003
Ru 51	1k0	5%	0,25W	12114908	003
Ru 54	R1		0,4W	13100014	003
Rz 01	27R	5%		13100038	003
Rz 02	5R6	5%	1,5W	13220602	003
Rz 03 36	12k	5%	0,25W	12117503	003
Rz 04	1R5	5%	0,5W	12458027	003
Rz 05	47R	5%	0,25W FP	12600663	003
Rz 06	220k		0,5W	12226023	003
Rz 07	R1		0,4W	13100014	003
Rz 08 09	15R	5%	0,25W FP	12600546	003
Rz 10	4k7	5%	0,25W FP	12601143	003
Rz 11	1k8	5%	0,25W FP	12601040	003
Rz 12	1k0	5%	0,25W FP	12600986	003
Rz 13	1k0	5%	0,125W SMD	12828005	003
Rz 14	220R	5%	0,125W SMD	12826447	003
Rz 15	15k	5%	0,25W FP	12601260	003
Rz 16 17 18 19 21 22	3R3	5%	0,25W FP	12600388	003
Rz 20	27k	5%	0,25W FP	12601325	003
Rz 23	27R	5%	0,25W	12111107	003
Rz 25	27k	5%	0,25W	12118306	003
Rz 26	330R	5%	0,25W	12113703	003
Rz 27	1k0	5%	0,25W	12114908	003
Rz 28	1k0	10%	1W	13223520	003
Rz 29 31	10k	5%	0,25W FP	12601222	003
Rz 32	3k9	5%	0,25W FP	12601129	003
Rz 33	1k2	5%	0,25W FP	12601002	003
Rz 34	470R	5%	0,25W	12114104	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Th 01	BC 847 B	SMD	42105018	004
Tk 01	BC 557 B		42155717	004
Tk 02	BC 547 B		42154718	004
Tk 03 04	BC 847 B	SMD	42105018	004
Tu 02	BC 547 B		42154718	004
Tu 03 04	BC 547 B		42154718	004
Tz 01	BC 547 B		42154718	004
Tz 02	BC 637		42163709	006
Tz 03	BU508AF		42401131	011
Tz 04	BUX 84 F		42400053	006
Tz 06 07	BC 557 B		42155717	004
Tz 08	2SD 2012		42401186	004

FUSES / SICHERUNG / SÄKRINGAR / SULAKKEET

Su 01 02	4,0 A T	54020601	004
Su 03	F 1,6 A	54020563	004

ZENERDIODES / ZENERDIODEN / ZENERDIODER / ZENERDIODIT

ZDu 01	BZX85C 13	5%	1,3W	41003152	003

II510 II511

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Ci 01	10u		63V	25054062	005
Ci 02	100n	10%	63V	24031309	005
Ci 03	2u2		63V	25054024	005
Ci 03 17 22 26 27	22n	10%	63V	24030908	005
Ci 04 06 12 16	2u2		63V	25054024	005
Ci 07	27p	5%	63V	23030133	005
Ci 08	1n2	5%	63V	22212058	005
Ci 09 (II510)	1n2	5%	63V	22212058	005
Ci 11 24	1u		63V	25054000	005
Ci 13	220n	10%	63V	24031505	005
Ci 14	330n	10%	63V	24031608	005
Ci 15	220p	5%	63V	23030239	005
Ci 18 28	1n	20%	63V	23030507	005
Ci 20	470p	5%	63V	23030277	005
Ci 21	1u	10%	50V	24032009	005
Ci 23	100u		16V	25053135	005

DIODES / DIODEN / DIODER / DIODIT

Di 01 02	BB 809	41005033	005

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICi 01	TDA 3857	43003332	015
ICi 02	TDA 3840	43003325	014

COILS / SPULEN / SPOLAR / KELAT

Li 01	Video detector	31000598	010
Li 02	H113 GNS-K 1645HM	31000361	010
Li 03 (II510)	H113 GNS-K 1645HM	31000361	010
Li 04	10uH B78108T1103K9	31300377	006
Li 06	38-6 H2920CS-2979Z	31000505	005

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Ri 01	2R2	5%	0,25W FP	12600340	003
Ri 02 12	560R	5%	0,25W FP	12600924	003
Ri 03 (II510)	560R	5%	0,25W FP	12600924	003
Ri 04	47R	5%	0,25W FP	12600663	003
Ri 06	180R	5%	0,25W FP	12600807	003
Ri 07 (II510)	220R	5%	0,25W FP	12600821	003
Ri 08	4k7	5%	0,25W	12116504	003
Ri 11	560R	5%	0,25W	12114300	003
Ri 13	2R2	5%	0,25W	12108505	003
Ri 14	150R	5%	0,25W FP	12600780	003
Ri 16 22	4k7	5%	0,25W FP	12601143	003
Ri 17	470R	5%	0,25W	12114104	003
Ri 18	220K	5%	0,25W FP	12601569	003
Ri 19	270R	5%	0,25W	12113507	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Ti 01	BC 547 B	42154718	004

FILTERS / FILTER / FILTER / SUODATTIMET

Fi 01	SFT 5,5 MA	31200154	010
Fi 02 (II510)	SFI 5,74 MA	31200161	010
Fi 03	OFW G3264	31201878	013
Fi 04	TPS 5,5MB	31200312	010

II501

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Ci 02	100n	10%	63V	24031309	005
Ci 03 04 06 13 22	2u2		63V	25054024	005
Ci 05	27p	5%	50V SMD	23061205	005
Ci 07 20 23 27 28 33 33 34 38	22n	20%	50V SMD	23066662	005
Ci 08 09	10u		63V	25054062	005
Ci 10 24	1u		63V	25054000	005
Ci 11 12 36	1n2	5%	63V	22212058	005
Ci 14	4u7		63V	25054048	005
Ci 18	2p2	5%	50V SMD	23060663	005
Ci 17	15p	5%	50V SMD	23061088	005
Ci 18	4p7	5%	63V	23030040	005
Ci 19	220n	10%	63V	24031505	005
Ci 21	330n	10%	63V	24031608	005
Ci 25 30	1n	10%	50V SMD	23062001	005
Ci 26	100u		16V	25053135	005
Ci 32	22n		63V	23030758	005
Ci 41	470n	10%	63V	24031701	005
Ci 43	1u	10%	50V	24032009	005

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICi 01	TDA 3858		43002371	015
ICi 02	TDA 3842		43003349	014
ICi 04	4053 C-MOS	SMD	44004017	007

COILS / SPULEN / SPOLAR / KELAT

Li 01	Video detector	31000598	010
Li 02 03 13	H113 GNS-K 1645HM	31000361	010
Li 04	19-34	93002314	005
Li 05	1uH	31301008	006
Li 06	38-4 H2920CS-3135X	31000488	005
Li 07	38-5 H2920NS-2978Z	31000495	005
Li 09	38-6 H2920CS-2979Z	31000505	005
Li 11	10uH B78108T1103K9	31300377	006

DIODES / DIODEN / DIODER / DIODIT

Di 01 02	BBY 40	SMD	41006094	006

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Ri 01 09	2R2	5%	0,25W FP	12600340	003
Ri 02 03	560R	5%	0,125W SMD	12827061	003
Ri 04	180R	5%	0,125W SMD	12826337	003
Ri 05	47R	5%	0,25W	12111705	003
Ri 06	220R	5%	0,125W SMD	12826447	003
Ri 10 30	470R	5%	0,125W SMD	12826942	003
Ri 18	150R	5%	0,125W SMD	12826228	003
Ri 23	560R	5%	0,25W	12114300	003
Ri 24	1k2	5%	0,125W SMD	12828098	003
Ri 25	2k2	5%	0,125W SMD	12828441	003
Ri 26	1k0	5%	0,125W SMD	12828005	003
Ri 29	2k2	5%	0,25W	12115701	003
Ri 31 32	4k7	5%	0,125W SMD	12828940	003
Ri 33	220k	5%	0,125W SMD	12832442	003
Ri 38	270R	5%	0,125W SMD	12826588	003
Ri 38 44	10k	5%	0,125W SMD	12830000	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Ti 01	BC 547 B		42154718	004
Ti 04	BC 847 B	SMD	42105018	004

FILTERS / FILTER / FILTER / SUODATTIMET

Fi 01	SFT 5.5 MA	31200154	010
Fi 02	SFI 5.74 MA	31200161	010
Fi 03	OFW G3264	31201878	016
Fi 04	TPS 5.5MB	31200312	010
Fi 07	SFE 6.5 MBB	31200305	006

GG500

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cg 01	22n	20%	50V SMD	23066662	005
Cg 02 03 04	1n	10%	50V SMD	23072005	005
Cg 06	100n	10%	250V	24061946	005
Cg 07	4u7		250V	25063204	006
Cg 08	22n	10%	250V	24060909	005
Cg 09	10u		250V	25063307	007
Cg 11	8n2	10%	1500V	24106007	006
Cg 12	470n	10%	63V	24031701	005

DIODES / DIODEN / DIODER / DIODIT

Dg 01 02	BYV 36C	41005215	002

COILS / SPULEN / SPOLAR / KELAT

Lg 01	10uH	31300377	006

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rg01 03 06	680R	5%	0,25W	12114506	003
Rg 02 04 07	1k5	5%	0.065W SMD	12808222	003
Rg 05	1k0	5%	0,25W	12114908	003
Rg 08	4k7	5%	0,065W SMD	12808942	003
Rg 09 11	4k7	5%	0,25W	12116504	003
Rg 12 13 14	39k	5%	1,0W	13213785	003
Rg 16 17 18 19 21 22	470R	5%	0,25W	12114104	003
Rg 23 24	1,5k	10%	0,5W	11215303	003
Rg 26	4M7	5%	0,25W	12123700	003
Rg 27	10k	5%	0,25W FP	12601222	003
Rg 28	22R	5%	0,065W SMD	12804443	003
Rg 29	1R5	5%	1,5W	13220042	003
Rg 31	8k2	5%	0,25W	12117101	003
Rg 32 33 34	150R	5%	0,065W SMD	12806225	003

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICg 01	TEA5101A	43001963	003

FC500

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cf 01 04	4n7	10%	50V SMD	23062324	005
Cf 02 06 08	100u		25V	25053434	005
Cf 03 07	100n	10%	63V	24031309	005
Cf 09	1u		63V	25054000	005

COILS / SPULEN / SPOLAR / KELAT

Lf 01 02 03	10uH	31300377	006

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rf 01 07 08	270R	5%	0,25W	12113507	003
Rf 02	1k2	5%	0,25W	12115103	003
Rf 03	10R	5%	0,25W FP	12600508	003
Rf 04	470R	5%	0,125W SMD	12826942	003
Rf 06 12 13	100k	5%	0,125W SMD	12832008	003
Rf 09 11	4k7	5%	0,125W SMD	12828940	003
RMs 01 02	2k2	5%	0,25W FP	12601064	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tf 01 02	BC 847 B	SMD	42105018	004

LED DIODES / LED DIODER / LED DIODIT

LED green	TLG 181P TSB	47001165	004
LED orange	TLS 181P TSB	47001172	004
IR-receiver	Mitsumi 38 kHz	47005002	012

RN500

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cr 01 04 17 18 22 23 26 34 51 61	100n	20%	50V SMD	23067004	005
Cr 02 03 13 31	1u		63V	25054000	005
Cr 06 12 14 16 21 32 33 42 44	10n	20%	50V SMD	23066501	005
Cr 07	47p	5%	50V SMD	23071325	005
Cr 08	6/30p		160V	27062007	006
Cr 09 28	18p	5%	50V SMD	23071126	005
Cr 11 29	56p	5%	50V SMD	23071368	005
Cr 19 24 27 38 48 52 53 59 64 66 72 73 74	47u		16V	25053111	005
Cr 36 37	180p	5%	50V SMD	23071625	005
Cr 39 46 54 56 71	100u		16V	25053135	005
Cr 41 43	220n	10%	63V	24031505	005
Cr 47 49	4n7	5%	50V SMD	23068322	005
Cr 57 58	22p	5%	50V SMD	23071164	005
Cr 62 63	680p	5%	50V SMD	23071903	005
Cr 67 69	1n2	5%	50V SMD	23062044	005
Cr 88	220u		16V	25023419	005

FILTERS / FILTER / FILTER / SUODATTIMET

Fr 01	TH3168QM-2080QDAF	31000536	015
Fr 02 03	LPF 15 kHz	31000550	012

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICr 01	TA 8662 N		44003049	040
ICr 02	TC 6011 N		44003063	038
ICr 03	4053 CMOS	SMD	44004017	007
ICr 04	PCF 8574		44001846	017
ICr 06 08	TL 082CDSMD		43007015	007
ICr 07	8K CMOS		44001584	023
ICr 09	TD 6710 AN		44003070	023

COILS / SPULEN / SPOLAR / KELAT

Lr 01 02	1m0 B78148S1105J	31303200	006
Lr 03 04 06	6u8 B78148T1682K9	31301068	006

DIODES / DIODEN / DIODER / DIODIT

Dr 01	BAS 16	SMD	41006032	003
Dr 03	BAV 70	SMD	41006018	004
Dr 02	BAW 56	SMD	41006025	004

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tr 01	BFS 20	SMD	42305000	007
Tr 02 03	BSR 13	SMD	42305024	004

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Jr 01 02 03 04	oR	5%	0,065W SMD	12800001	003
Rr 01 06 11 13 17 22 23 26	1k0	5%	0,065W SMD	12808008	003
Rr 02 14	470R	5%	0,065W SMD	12806946	003
Rr 03	47R	5%	0,065W SMD	12804946	003
Rr 04	560R	5%	0,065W SMD	12807064	003
Rr 07	220k	5%	0,065W SMD	12812445	003
Rr 08 51 61	150k	5%	0,065W SMD	12812227	003
Rr 09 41 42	330R	5%	0,065W SMD	12806712	003
Rr 12 16 28 52 58	3k3	5%	0,065W SMD	12808717	003
Rr 18 19 27 39 54 57	10k	5%	0,065W SMD	12810003	003
Rr 24	68k1	1%	0,065W SMD	12811198	003
Rr 29 31 32 33	4M7	5%	0,065W SMD	12814944	003
Rr 34	1R5	10%	0,4W	13100155	003
Rr 36	100k	5%	0,065W SMD	12812006	003
Rr 37 46	8k2	5%	0,065W SMD	12809295	003
Rr 38 47	62k	5%	0,065W SMD	12811185	003
Rr 43 48	4k7	5%	0,065W SMD	12808942	003
Rr 44	2R2	5%		13100045	003
Rr 49 56	47k5	1%	0,065W SMD	12810969	003
Rr 53 59	39k	5%	0,065W SMD	12810823	003

CRYSTALS / QUARZE / KRISTALLER / KITEET

Xr 01	5,85 MHz	48004549	010
Xr 02	5,824 MHz	48004556	010
Xr 03	16.930 MHz	31200484	009

TX500

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Ct 01 02 03	10n	20%	50V SMD	23066501	005
Ct 04 07	22p	5%	50V SMD	23061167	005
Ct 05 08 09 10 11 12 14 18 19 21	100n	20%	50V SMD	23067004	005
Ct 06	10p	5%	50V SMD	23061002	005
Ct 13	33p	5%	50V SMD	23061246	005
Ct 16 17	47u		16V	25053111	005

DIODES / DIODEN / DIODER / DIODIT

Dt 01	BAW 56	SMD	41006025	006

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICt 01	SAA 5246		44000279	040
ICt 02	8K CMOS		44001584	023
ICt 03	74LS136		44031365	014
ICt 04	4053 C-MOS	SMD	44004017	007

COILS / SPULEN / SPOLAR / KELAT

Lt 01	4u7 78138S1472K	31300511	006
Lt 02	4330 030 38771	31303312	005

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Jt 01 02	0R		0,125W SMD	12820000	003
Rt 01	15k	5%	0,125W SMD	12830220	003
Rt 02	4k7	5%	0,125W SMD	12828940	003
Rt 03 34	10k	5%	0,125W SMD	12830000	003
Rt 04	10R	5%	0,25W	12110108	003
Rt 06	27k	5%	0,25W	12118306	003
Rt 07 28	390R	5%	0,125W SMD	12826825	003
Rt 08 17 26 27 29	1k0	5%	0,125W SMD	12828005	003
Rt 09 12 14	270R	5%	0,125W SMD	12826588	003
Rt 11 13 16	2k2	5%	0,125W SMD	12828441	003
Rt 18	180R	5%	0,25W	12113105	003
Rt 19 21 22	220R	5%	0,25W	12113301	003
Rt 23	2k7	5%	0,125W SMD	12828581	003
Rt 24	1k0	5%	0,25W	12600986	003
Rt 31 32 33	220R	5%	0,125W SMD	12826447	003
Rt 36	470R	5%	0,125W SMD	12826942	003
Rt 37	47R	5%	0,125W SMD	12824944	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tt 01 03	BC 847 B	SMD	42105018	006
Tt 02	BC 857 B	SMD	42105032	006

CRYSTALS / QUARZE / KRISTALLER / KITEET

Xt 01	27MHz	48004649	012

LL500 LL501

Item	**Description**	Order no.	PG
Pos.	**Bezeichung**	Et-Nummer	PG
Pos.	**Benämning**	Art.nr.	PG
Viite	**Osa/arvo**	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cl 01 06	390p	5%	63V	23030260	005
Cl 04 08 37 44 46 47 52-54 57 58 59 62	100n	10%	63V	24031309	005
Cl 09 14 33 38 43	330p	5%	63V	23030253	005
Cl 11 13 16 18 39 48 49 51 64 66 67 68 71 72 73 74	10u		63V	25054062	005
Cl 12 17 41 42	1n	20%	63V	23030507	005
Cl 21 24 (LL500)	390p	5%	63V	23030260	005
Cl 23 (LL500)	1n	20%	63V	23030507	005
Cl 27 29 32 67 (LL500)	10u		63V	25054062	005
Cl 28 31 (LL500)	330p	5%	63V	23030253	005
Cl 56 61	100u		16V	25053135	005

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICl 01	CD 4052 BE	44002301	016
ICl 02	HEF 4053	44001728	007

COILS / SPULEN / SPOLAR / KELAT

Ll 01 05	2u2B78108S1222K	31300463	005
Ll 02 (LL501)	2u2B78108S1222K	31300463	005
Ll 03 04 (LL500)	2u2B78108S1222K	31300463	005

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rl 01 06 31-34 37	75R	5%	0,25W	12112209	003
Rl 02 28	68R	5%	0,25W	12112106	003
Rl 03 29	330R	5%	0,25W	12113703	003
Rl 04 08 14 27 38 43 63 64 66 67 72 76 77 78 79 87 88 89 93	1k0	5%	0,25W	12114908	003
Rl 07 09 12 16 18 36 39 42 44 47 48 49 51 53 54 56 57 59 81 62 63 91 92	100k	5%	0,25W	12119707	003
Rl 10 40	15k	5%	0,25W	12117709	003
Rl 11 13 17 19 41 46 61 62	470R	5%	0,25W	12114104	003
Rl 20 25 (LL500)	75R	5%	0,25W	12112209	003
Rl 21 23 (LL500)	1k0	5%	0,25W	12114908	003
Rl 22 24 58 (LL500)	100k	5%	0,25W	12119707	003
Rl 26 68 69	100R	5%	0,25W	12112508	003
Rl 52 (LL500)	100k	5%	0,25W	12119707	003
Rl 71	10k	5%	0,25W	12117307	003
Rl 73	8k2	5%	0,25W	12117101	003
Rl 74	R68	5%	0,25W FP	12600223	003
Rl 86	47k	5%	0,25W	12118904	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tl 01-07 09-14	BC 547 B	42154718	004

CONNECTORS / BUCHSEN / KONTAKTER / LIITTIMET

RCA Audio connector	(LL500)Lumberg	51100588	005
Mini Din S-VHS	(LL500)	51105121	008
Scart	Metallo	51105227	008

LL502

Item	**Description**	Order no.	PG
Pos.	**Bezeichung**	Et-Nummer	PG
Pos.	**Benämning**	Art.nr.	PG
Viite	**Osa/arvo**	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cl 01 06 09 14 24	390p	5%	63V	23030260	005
Cl 04 08 21 22	100n	10%	63V	24031309	005
Cl 11 13 16 18 27 28 29 31 32	10u	63V		25054062	005
Cl 12 17	1n	20%	63V	23030507	005
Cl 23 26	100u		16V	25053135	005

COILS / SPULEN / SPOLAR / KELAT

Ll 01 02	2u2B78108S1222K	31300463	005

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rl 01 06	75R	5%	0,25W	12112209	003
Rl 02	68R	5%	0.25W	12112106	003
Rl 03	330R	5%	0,25W	12113703	003
Rl 04 08 14 28 29 31 32 33 34 36 37	1k0	5%	0,25W	12114908	003
Rl 07 09 12 16 18 23 24 26 27	100k	5%	0,25W	12119707	003
Rl 10	15k	5%	0,25W	12117709	003
Rl 11 13 17 19	470R	5%	0,25W	12114104	003
Rl 21 22	10k	5%	0,25W	12117307	003
Rl 38	R68	5%	0,25W FP	12600223	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tl 01-06	BC 547 B	42154718	004

CONNECTORS / BUCHSEN / KONTAKTER / LIITTIMET

Scart	Metallo	51105227	008

LC501

Item	**Description**	Order no.	PG
Pos.	**Bezeichung**	Et-Nummer	PG
Pos.	**Benämning**	Art.nr.	PG
Viite	**Osa/arvo**	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cl 01 11 12 16 21 22	390p	5%	63V	23030260	005
Cl 02 09	1u		63V	25054000	005
Cl 03 08	100p	5%	63V	23030198	005
Cl 04 23	100n	10%	63V	24031309	005
Cl 06 07	100u		25V	25053434	005
Cl 14	10u		63V	25054062	005
Cl 18	1n	20%	63V	23030507	005

COILS / SPULEN / SPOLAR / KELAT

Ll 0102	2u2 B78108S1222K	31300463	005

INTEGRATED CIRCUITS / INTEGRIERTE SCHALTUNGEN / INTEGRERADE KRETSAR / MIKROPIIRIT

ICl 01	TL 082 CP	43003576	016

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

RI 01 13	1k0	5%	0,25W FP	12600986	003
RI 02 03 04 09 11 12	100k	5%	0,25W FP	12601480	003
RI 06 07	100R	5%	0,25W	12112508	003
RI 08 14	22k	5%	0,25W FP	12601301	003
RI 16 17	75R	5%	0,25W	12112209	003
RI 21	33R	5%	0,25W	12111303	003

CONNECTORS / BUCHSEN / KONTAKTER / LIITTIMET

RCA Audio connector	Esser	51100739	005
Mini Din S-VHS		51105369	008

VS500

Item	Description	Order no.	PG
Pos.	Bezeichung	Et-Nummer	PG
Pos.	Benämning	Art.nr.	PG
Viite	Osa/arvo	Til.no.	HR

CAPACITORS / KONDENSATOREN / KONDENSATORER / KONDENSAATTORIT

Cv 01	47n	10%	63V	24031103	005

DIODES / DIODEN / DIODER / DIODIT

Dv 02	1N 4148	41004481	002
Dv 03	1N 4007 1000V 1A	41004072	003

RESISTORS / WIDERSTÄNDE / MOTSTÅND / VASTUKSET

Rv 01 02 04 05	10k	5%	0,25W	12117307	003
Rv 03	820R	5%	0,25W	12114702	003
Rv 06	330R	5%	0,25W FP	12600869	003
Rv 07	1k0	5%	0,25W	12114908	003
Rv 08	470R	5%	0.25W	12114104	003

TRANSISTORS / TRANSISTOREN / TRANSISTORER / TRANSISTORIT

Tv 01	BUZ 71 BUK 453-50B	44001814	013
Tv 02	BC 547 B	42154718	004
Tv 03	BC637	42163709	006

ZENERDIODES / ZENERDIODEN / ZENERDIODER / ZENERDIODIT

ZDv 01	BZX 85C 30 5% 1,3W	41003372	003

MODULES

Description		Order no.	PG
Main board		AB	057
IF module	G/E standard	II510	037
IF module	A/N standard	II511	040
IF module	multistandard	II501	041
Control unit		FC501	022
CRT-socket module		GG500	027
Connection unit	2 Scart+Mini Din	LL500	036
	2 Scart	LL501	036
	1 Scart	LL502	031
	MiniDin + RCA	LC501	036
Switching module		SW500	023
Subtitle recording module		MM500	038
Vertical switching module		Vs500	018
Nicam module		RN500	046
Teletext module		TX500	

MODULE

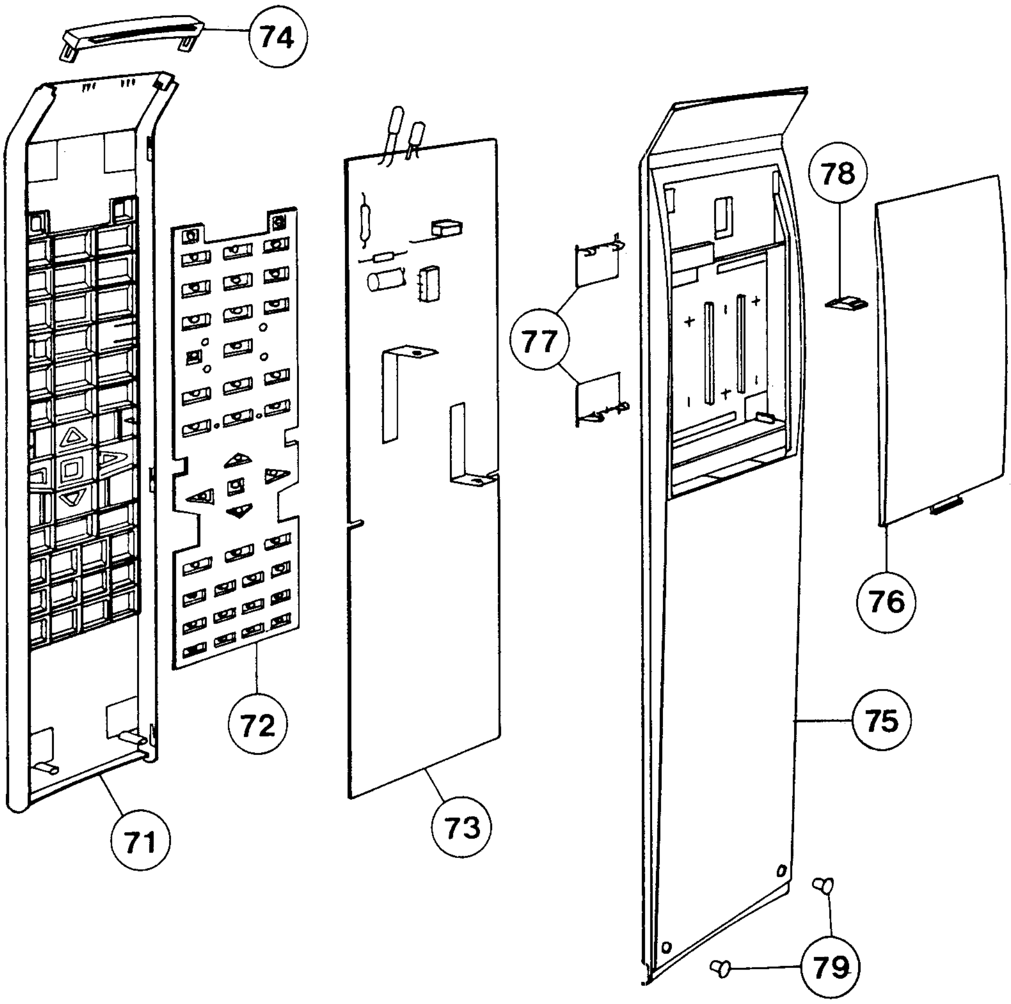
Bezeichung		Et-Nummer	PG
Grundplatine		AB	057
ZF-Modul	G/E Standard	II510	037
ZF-Modul	A/N Standard	II511	040
ZF-Modul	Multistandard	II501	041
Bedienteil		FC501	022
Bildröhrenplatte		GG500	027
Anscblussplatine	2 Scart+Mini Din	LL500	036
	2 Scart	LL501	036
	1 Scart	LL502	031
	MiniDin + RCA	LC501	036
Schalt Modul		SW500	023
Teletext-Insertmodul		MM500	038
Vertikal Schalt-Modul		Vs500	018
Nicam-Modul		RN500	046
Teletext-Modul		TX500	

MODULER

Benämning		Art.nr	PG
Huvudplatta		AB	057
IF-modul	G/E-standard	II510	037
IF-modul	A/N-standard	II511	040
IF-modul	multistandard	II501	041
Kontrollenhet		FC501	022
Bildrörets sockelmodul	GG500	027	
Kontaktenhet	2 Scart+Mini Din	LL500	036
	2 Scart	LL501	036
	1 Scart	LL502	031
	MiniDin + RCA	LC501	036
Switchmodul		SW500	023
Textningsmodul		MM500	038
Vertikal switchmodule		Vs500	018
Nicam-modul		RN500	046
Teletext-modul		TX500	

MODULIT

Osa		Til.no	HR
Peruslevy		AB	057
IF-moduli	G/E-standardi	II510	037
IF-moduli	A/N-standardi	II511	040
IF-moduli	multistandardi	II501	041
Säädinyksikkö		FC501	022
Kuvaputken kantalevy	GG500	027	
Liitinyksikkö	2 Scart+Mini Din	LL500	036
	2 Scart	LL501	036
	1 Scart	LL502	031
	MiniDin + RCA	LC501	036
Kytkinmoduli		SW500	023
Tekstitysmoduli		MM500	038
Kenttäpoikkeutuksen kytkinmoduli		Vs500	018
Nicam-moduli		RN500	046
Teletext-moduli		TX500	



RC500 / 501

Pos.	Description		Order no:	PG
Transmitter	Digi Master	black	RC500	042
	Digi Master	white	RC501	042
71.	Transmitter cover	black	80416552	012
		white	80416569	012
72.	Contact matrix		52011628	013
73.	Tc-board		TC400	030
74.	Transmitter window		80416020	008
75.	Transmitter bottom	black	80416006	012
		white	80416044	012
76.	Battery cover	black	80416037	007
		white	80416068	007
77.	Battery contactspring		81403070	004
78.	Contactspring support		80413917	002
79.	Cover piece		80413924	002
Transmitter	Finlux		RC510	036
Transmitter	Finlux		RC520	031

RC500 / 501

Pos.	Benämning		Art.nr.	PG
Fjärrkontroll	Digi Master svart		RC500	042
	Digi Master vit.		RC501	042
71	Fjärrkontrollens överdel	svart	80416552	012
		vit	80416569	012
72.	Kontaktmatta		52011628	013
73.	Tc-block		TC400	030
74.	Fönster		80416020	008
75.	Fjärrkontrollens underdel	svart	80416006	012
		vit	80416044	012
76.	Batterilock	svart	80446037	007
		vit	80416068	007
77.	Kontaktdel		81403070	004
78.	Stöjdplatta		80413917	002
79.	Täckstycke		80413924	002
Fjärrkontroll	Finlux		RC510	036
Fjärrkontroll	Finlux		RC520	031

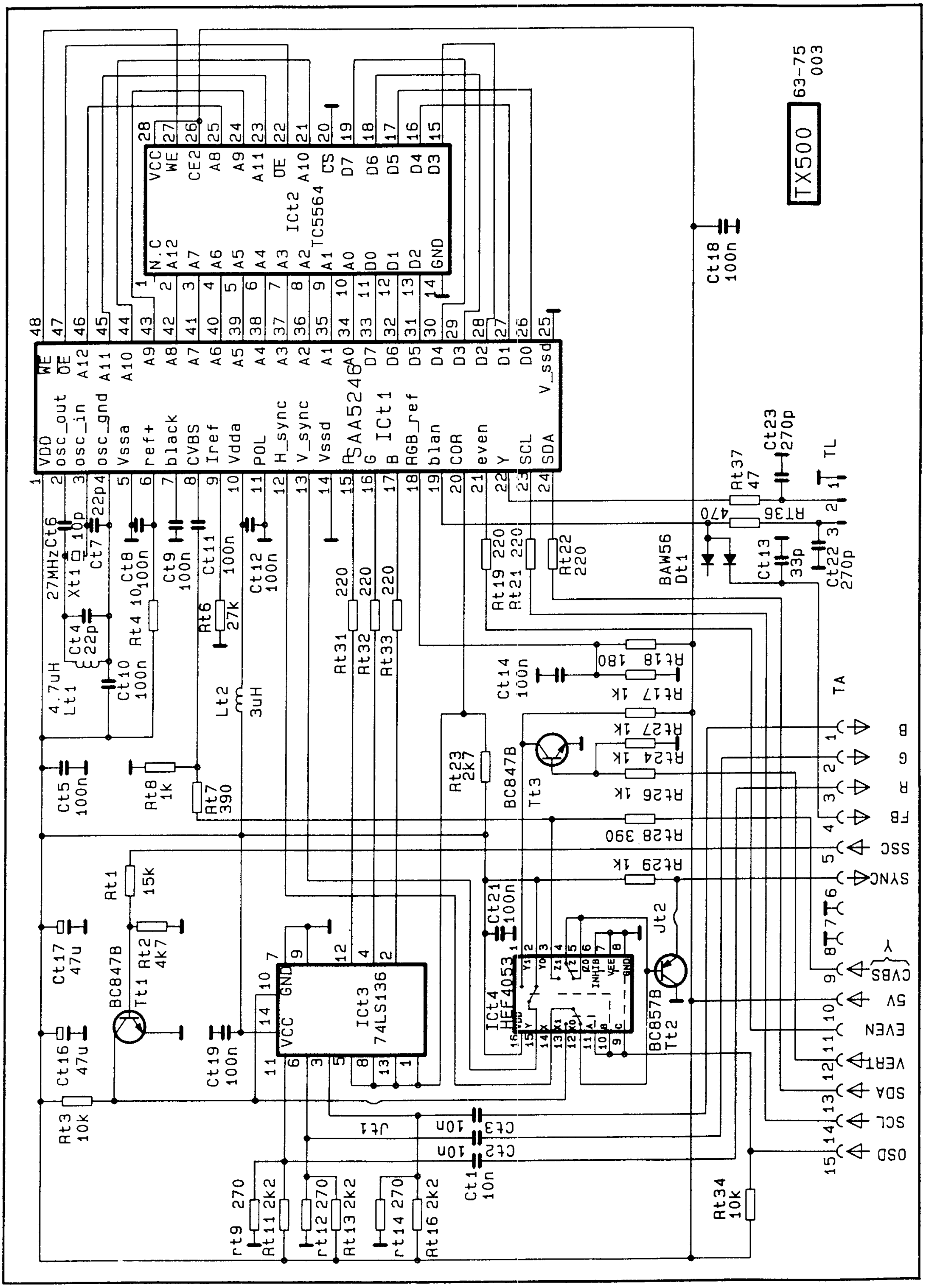
RC500 / 501

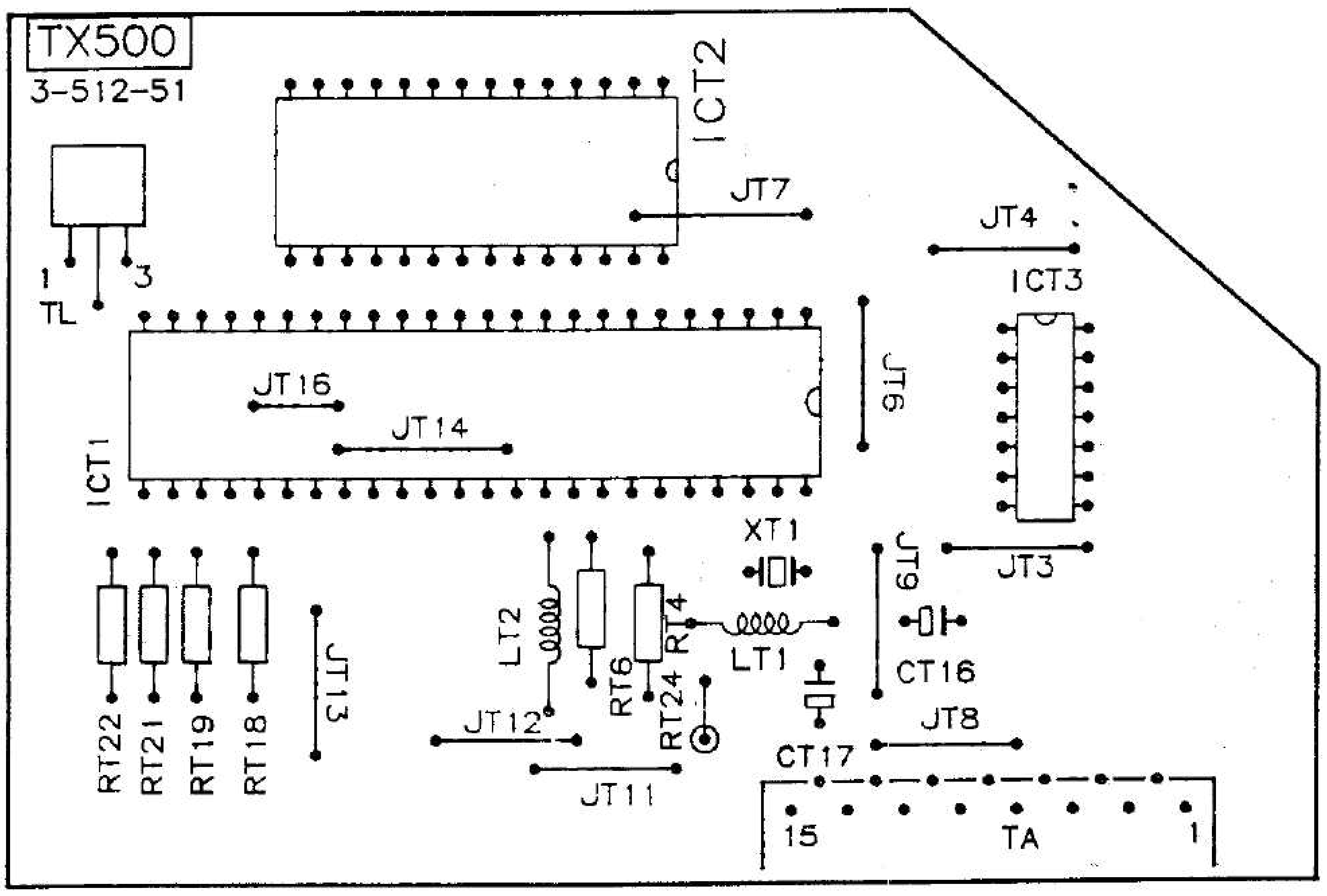
Pos.	Bezeichnung		Et-Nummer	PG
Fernbedienungsgeber				
	Digi Master	schwarz	RC500	042
	Digi Master	weiss	RC501	042
71.	Oberteil der Fernbedienung	schwarz	80416552	012
		weiss	80416569	012
72.	Kontaktfeld		52011628	013
73.	Tc-Platine		TC400	030
74.	Fenster des Fernbedienungsgebers		80416020	008
75.	Unterteil der Fernbedienung	schwarz	80416006	012
		weiss	80416068	012
76.	Batteriedeckel	schwarz	80446037	007
		weiss	80416060	007
77.	Batterikontaktknopf		81403070	004
78.	Stützplatte		80413917	002
79.	Schutzstück		80413924	002
Fernbedienungsgeber	Finlux		RC510	036
Fernbedienungsgeber	Finlux		RC520	031

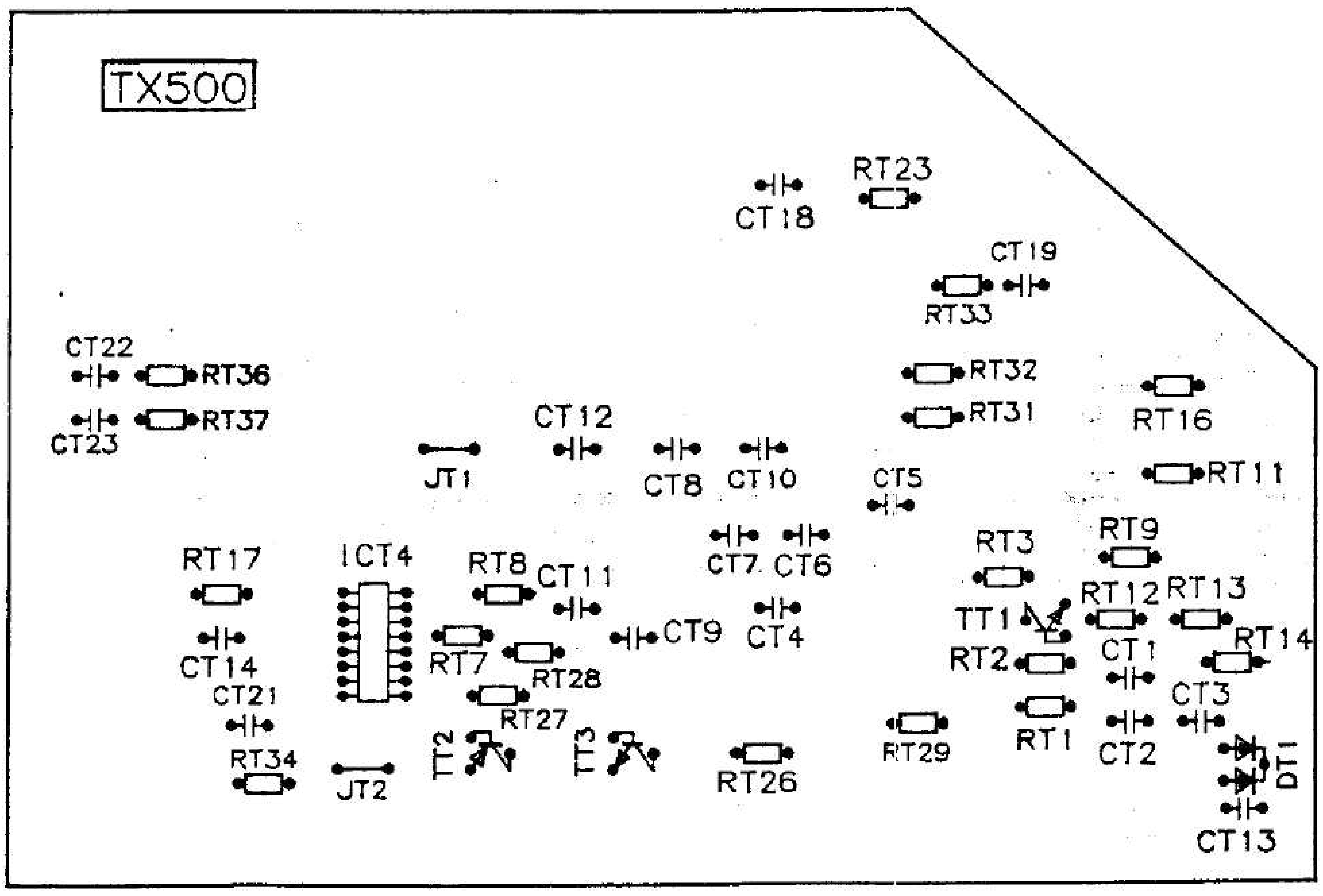
RC500 / 501

Viite	Osa/arvo		Til.no.	HR
Kauko-ohjain	Digi Master musta		RC500	042
	Digi Master valk.		RC501	042
71.	Kauko-ohjaimen kansi	musta	80416552	012
		valk.	80416569	012
72.	Kytkinmatto		52011628	013
73.	Tc-levy		TC400	030
74.	Kauko-ohjaimen linssi		80416020	008
75.	Kauko-ohjaimen pohja	musta	80416006	012
		valk.	80416044	012
76.	Paritokotelon kansi	musta	80446037	007
		valk.	80416068	007
77.	Pariston kontaktikappale		81403070	004
78.	Jousen vastakappale		80413917	002
79.	Suojatulppa		80413924	002
Kauko-ohjain	Finlux		RC510	036
Kauko-ohjain	Finlux		RC520	031

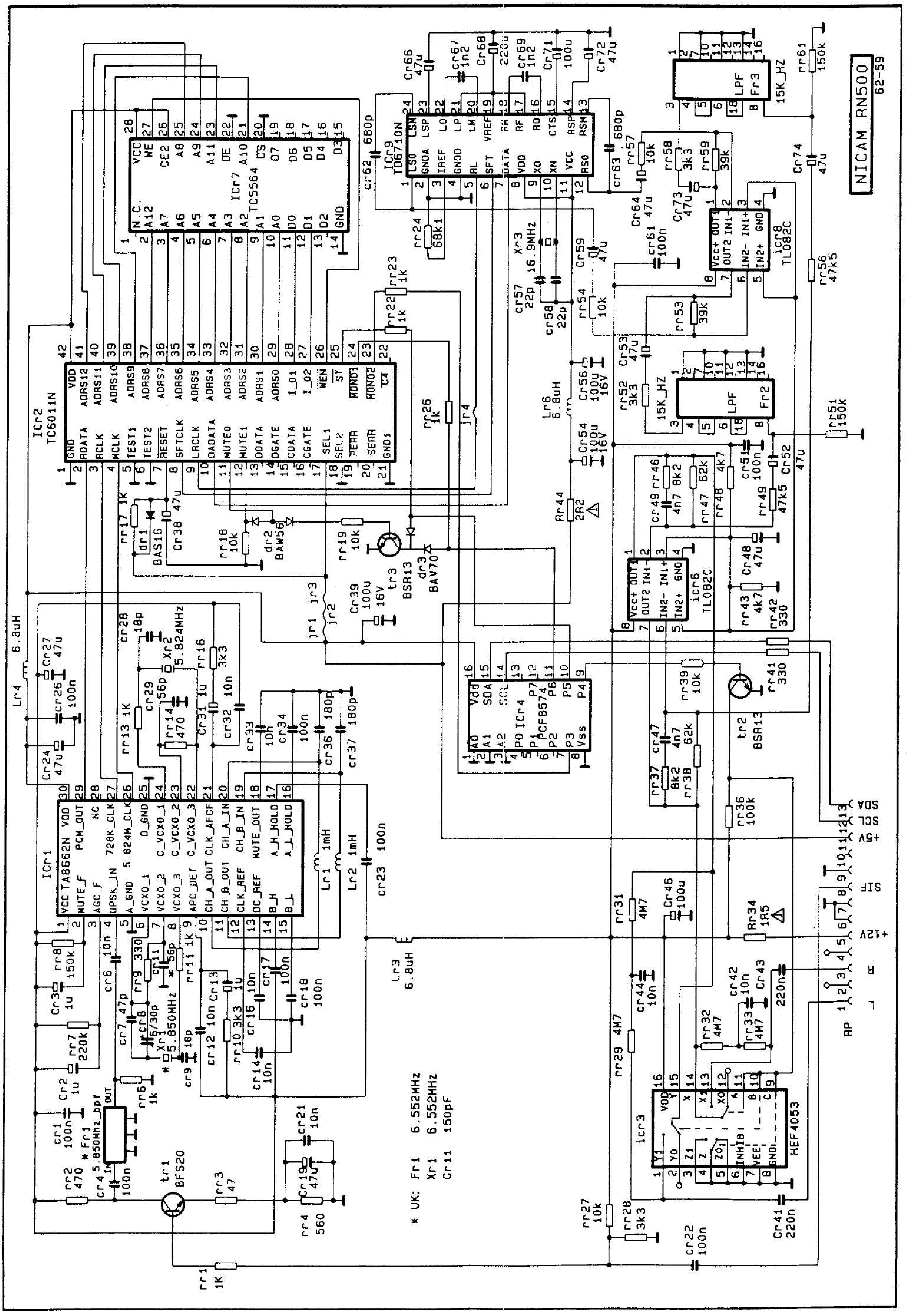
TELETEXT MODULE TX500


TX500
63-75
003
ICt2
TC5564
N.C
A12
A7
A6
A5
A4
A3
A2
A1
A0
D0
D1
D2
GND
VCC
WE
CE2
A8
A9
A11
OE
A10
CS
D7
D6
D5
D4
D3
SAA5246
ICt1
VDD
osc_out
osc_in
osc_gnd
Vssa
ref+
black
CVBS
Iref
Vdda
POL
H_sync
V_sync
Vssd
R
G
B
RGB_ref
blan
COR
even
Y
SCL
SDA
V_ssd
27MHz
Xt1
Ct6 10p
Ct7 22p4
Ct4 22p
Lt1 4.7uH
Ct10 100n
Ct8 100n
Rt4 10
Ct9 100n
Ct11
Rt6 27k
Ct12 100n
Lt2 3uH
Rt31 220
Rt32 220
Rt33 220
Rt19 220
Rt21 220
Rt22 220
Ct18 100n
Rt37 47
Ct23 270p
TL
RT36 470
BAW56
Dt1
Ct13 33p
Ct22 270p
Rt18 180
Ct14 100n
Rt17 1K
Rt27 1K
Rt24 1K
Rt26 1K
Rt28 390
Rt29 1K
Rt23 2k7
BC847B
Tt3
TA
Ct5 100n
Rt8 1k
Rt7 390
Rt1 15k
Rt2 4k7
Ct17 47u
Ct16 47u
BC847B
Tt1
Rt3 10k
Ct19 100n
ICt3
74LS136
VCC
GND
Ct21 100n
ICt4
HEF4053
Jt2
BC857B
Tt2
Jt1
Ct3 10n
Ct2 10n
Ct1 10n
rt9 270
Rt11 2k2
rt12 270
Rt13 2k2
rt14 270
Rt16 2k2
Rt34 10k
B
G
R
FB
SSC
SYNC
Y
CVBS
5V
EVEN
VERT
SDA
SCL
OSD

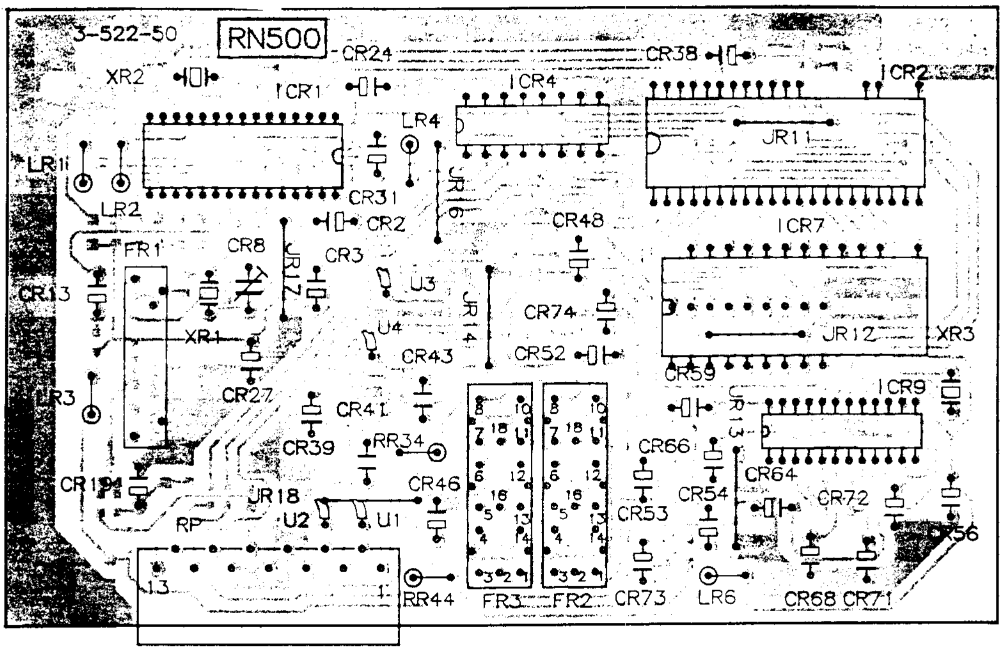

TX500
3-512-51
ICT2
JT7
JT4
ICT3
1
3
TL
JT16
JT14
JT6
ICT1
XT1
JT9
JT3
LT2
RT6
RT4
LT1
CT16
JT13
RT22
RT21
RT19
RT18
JT12
RT24
CT17
JT8
JT11
15
TA
1

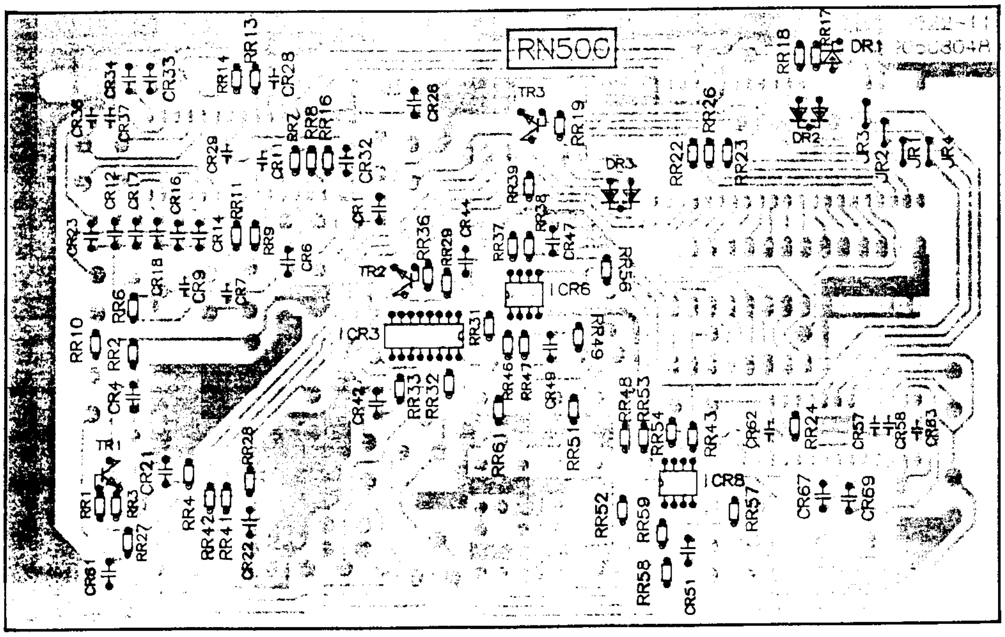

TX500
RT23
CT18
CT19
RT33
CT22
RT36
RT37
CT23
RT32
RT31
RT16
CT12
JT1
CT8
CT10
CT5
RT11
CT7
CT6
RT3
RT9
RT17
ICT4
RT8
CT11
TT1
RT12
RT13
CT9
CT4
RT2
CT1
RT14
RT7
RT28
CT14
CT21
RT27
CT3
RT29
RT1
CT2
DT1
RT34
TT2
TT3
JT2
RT26
CT13

NICAM MODULE RN500

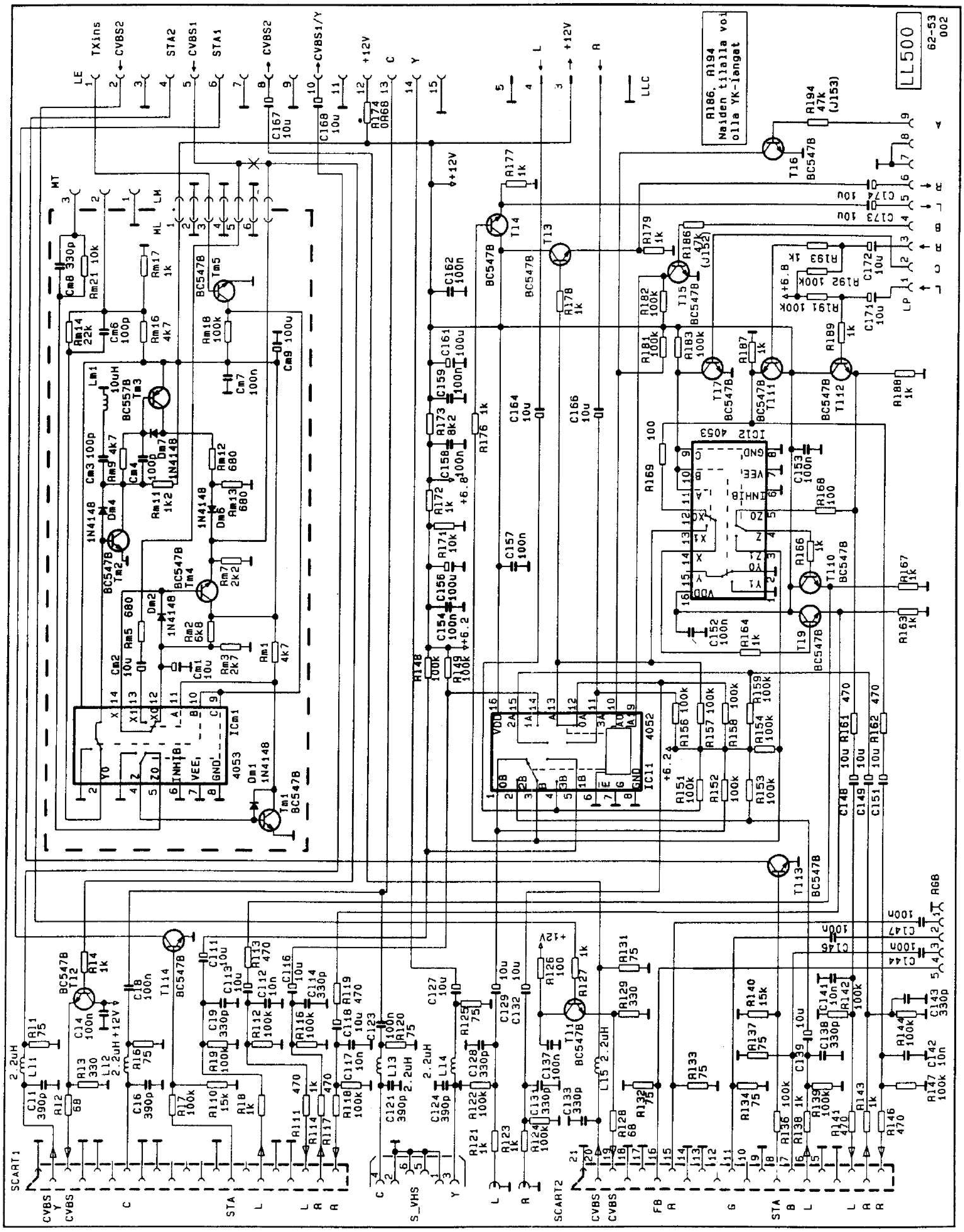

NICAM RN500
62-59
ICr1 TA8662N
ICr2 TC6011N
ICr7 TC5564
ICr9 TD6710N
ICr4 PCF8574
icr6 TL082C
icr8 TL082C
icr3 HEF4053
LPF Fr3 15K_HZ
LPF Fr2 15K_HZ
Fr1 5.850Mhz_bpf
tr1 BFS20
tr2 BSR13
tr3 BSR13
dr1 BAS16
dr2 BAW56
dr3 BAV70
Xr1 5.850MHz
Xr2 5.824MHz
Xr3 16.9MHz
Lr1 1mH
Lr2 1mH
Lr3 6.8uH
Lr4 6.8uH
Lr6 6.8uH
jr1 jr2 jr3 jr4
Cr66 47u
cr67 1n2
Cr68 220u
cr69 1n2
Cr71 100u
Cr72 47u
cr62 680p
cr63 680p
rr24 68k1
rr23 1k
rr22 1k
rr26 1k
rr57 10k
rr58 3k3
rr59 39k
Cr64 47u
Cr73 47u
Cr74 47u
rr61 150k
rr56 47k5
cr61 100n
Cr59 47u
cr57 22p
cr58 22p
rr54 10k
rr53 39k
Cr53 47u
Cr56 100u 16V
Cr54 100u 16V
rr52 3k3
rr51 150k
Cr52 47u
cr51 100n
rr49 47k5
rr46 8k2
rr47 62k
rr48 4k7
cr49 4n7
Rr44 2R2
Cr48 47u
rr43 4k7
rr42 330
rr41 330
rr39 10k
Cr47 4n7
rr37 8k2
rr38 62k
rr36 100k
rr17 1k
Cr38 47u
rr18 10k
rr19 10k
Cr39 100u 16V
cr28 18p
cr29 56p
rr16 3k3
rr13 1K
rr14 470
Cr31 1u
cr32 10n
cr33 10n
cr34 100n
cr36 180p
cr37 180p
Cr27 47u
cr26 100n
Cr24 47u
cr23 100n
rr8 150k
cr6 10n
rr9 330
cr11 56p
rr11 1k
Cr3 1u
cr7 47p
cr8 6/30p
Cr13 1u
rr7 220k
cr9 18p
cr12 10n
rr10 3k3
cr16 10n
Cr17 100n
cr18 100n
cr14 10n
Cr2 1u
rr6 1k
cr1 100n
rr2 470
cr4 100n
rr3 47
Cr21 10n
Cr19 47u
rr4 560
rr1 1K
rr31 4M7
Cr46 100u
Rr34 1R5
cr44 10n
cr42 10n
Cr43 220n
rr29 4M7
rr32 4M7
rr33 4M7
rr27 10k
rr28 3k3
cr22 100n
Cr41 220n
SDA
SCL
+5V
SIF
+12V
R
L
AP
* UK: Fr1 6.552MHz
Xr1 6.552MHz
Cr11 150pF

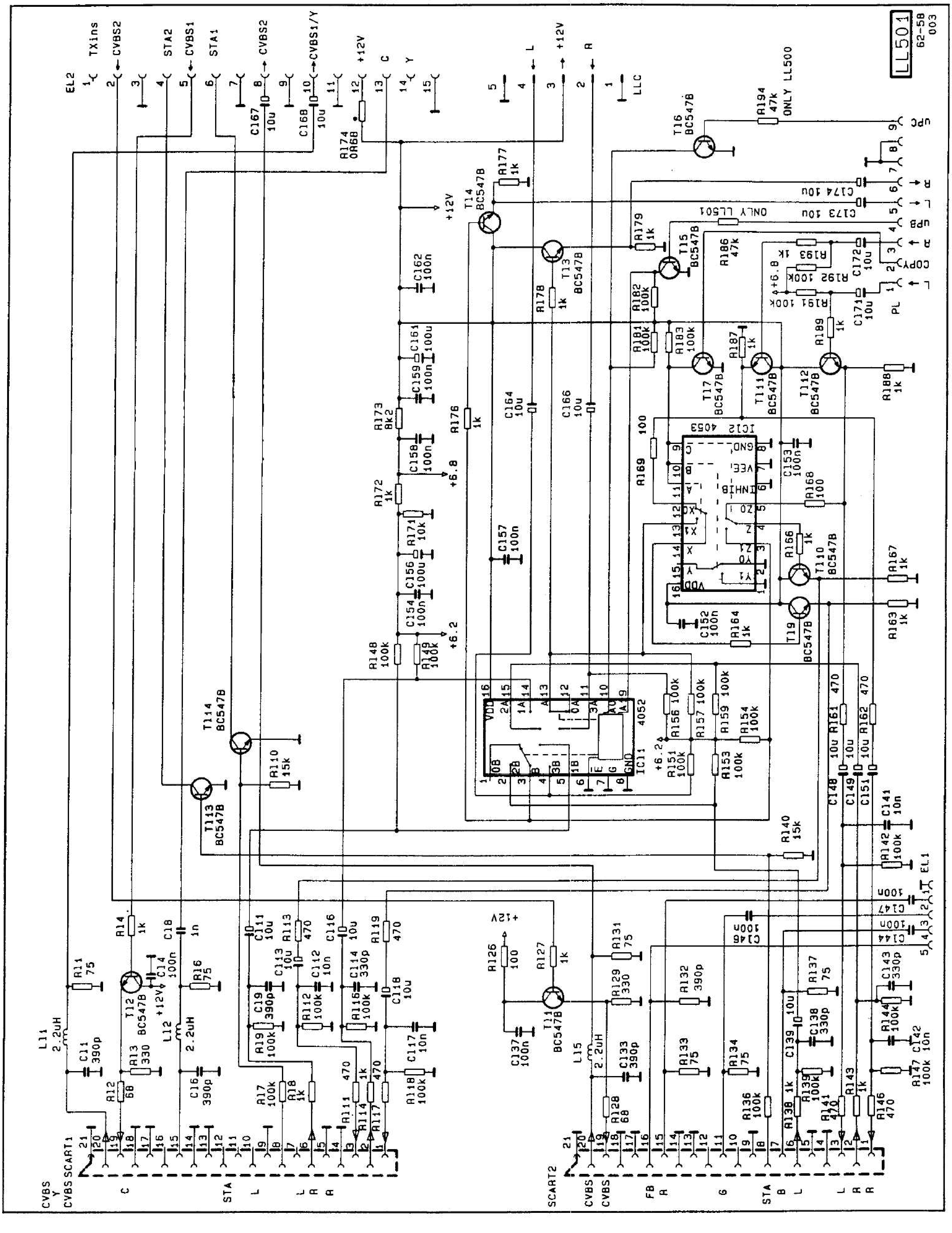
NICAM MODULE RN500


3-522-50
RN500
CR24
CR38
XR2
ICR1
ICR4
ICR2
LR4
JR11
LR1
CR31
JR16
LR2
CR2
CR48
ICR7
FR1
CR8
JR17
CR3
U3
CR13
JR14
CR74
U4
XR1
JR12
XR3
CR43
CR52
CR27
CR59
ICR9
LR3
CR41
JR13
CR39
RR34
CR66
CR64
CR19
CR46
CR54
CR72
JR18
U2
U1
CR53
CR56
RP
13
1
RR44
FR3
FR2
CR73
LR6
CR68
CR71


RN500
RR13
RR14
CR28
CR34
CR33
CR36
CR37
RR18
RR17
DR1
CR26
TR3
RR19
RR26
DR2
JR3
JR2
JR1
JR4
CR29
CR11
RR7
RR8
RR16
CR32
RR22
RR23
DR3
CR12
CR17
CR16
RR11
CR1
RR39
RR38
CR23
CR14
RR9
CR6
RR36
RR29
CR44
RR37
CR47
RR56
CR18
CR9
CR7
TR2
ICR6
RR6
RR10
RR2
ICR3
RR31
RR49
RR46
RR47
CR49
CR4
CR42
RR33
RR32
RR48
RR53
RR28
RR61
RR51
RR54
RR43
CR62
RR24
CR57
CR58
CR63
TR1
CR21
ICR8
RR1
RR3
RR4
RR42
RR41
RR27
CR22
RR52
RR59
RR57
CR67
CR69
CR61
RR58
CR51

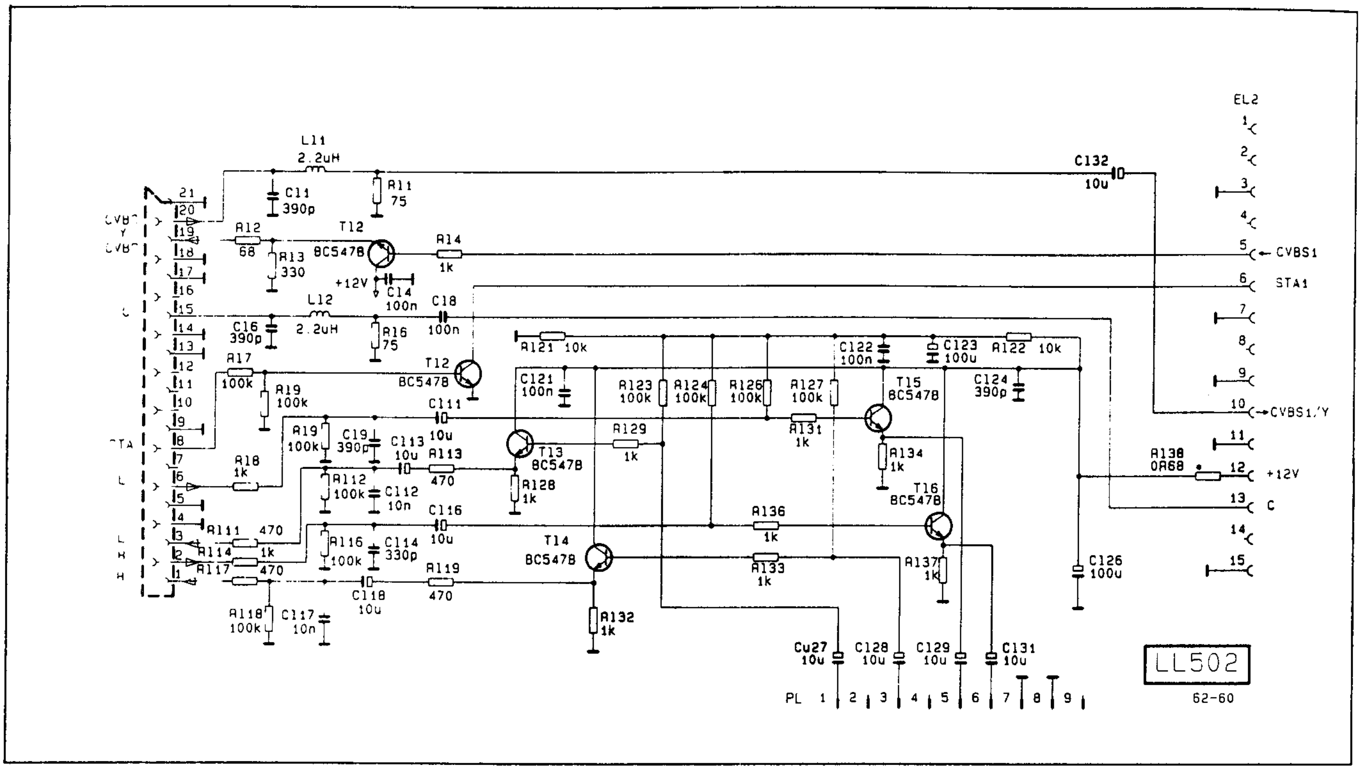
CONNECTION MODULE LL500


LL500
62-53
002
R186, R194
Naiden tilalla voi
olla YK-langat
SCART1
SCART2
S_VHS
CVBS
Y
C
STA
L
R
FB
G
B
TXins
CVBS2
STA2
CVBS1
STA1
CVBS1/Y
+12V
LE
MT
LM
ML
LLC
LP
RGB
IC11 4052
IC12 4053
ICm1 4053
T12 BC547B
T13 BC547B
T14 BC547B
T15 BC547B
T16 BC547B
T17 BC547B
T19 BC547B
T110 BC547B
T111 BC547B
T112 BC547B
T113 BC547B
T114 BC547B
Tm1 BC547B
Tm2 BC547B
Tm3 BC557B
Tm4 BC547B
Tm5 BC547B
Lm1 10uH
Dm1 1N4148
Dm2 1N4148
Dm4 1N4148
Dm6 1N4148
Dm7 1N4148
R174 0R68
R194 47k (J153)
R186 47k (J152)
+6.8
+6.2

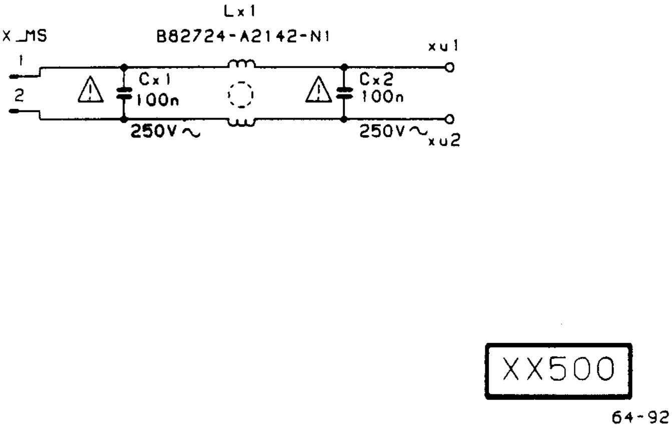

LL501
62-58
003
EL2
TXins
CVBS2
STA2
CVBS1
STA1
CVBS2
CVBS1/Y
+12V
C
Y
L
+12V
R
LLC
C167 10u
C168 10u
R174 0R68
R177 1k
T14 BC547B
T13 BC547B
T15 BC547B
T16 BC547B
R194 47k
ONLY LL500
UPC
R
L
C174 10u
C173 10u
ONLY LL501
UPB
COPY
PL
R179 1k
R186 47k
R193 1k
R192 100K
R191 100K
+6.8
C172 10u
C171 10u
C162 100n
C161 100u
C159 100n
R173 8k2
C158 100n
+6.8
R172 1k
R171 10k
C156 100u
C154 100n
+6.2
R148 100k
R149 100k
R176 1k
R178 1k
C164 10u
C166 10u
C157 100n
R182 100k
R181 100k
R183 100k
R187 1k
R189 1k
R188 1k
T17 BC547B
T111 BC547B
T112 BC547B
IC12 4053
R169 100
C153 100n
R168 100
R166 1k
T110 BC547B
R167 1k
R163 1k
R164 1k
T19 BC547B
C152 100n
IC11 4052
+6.2
R156 100k
R157 100k
R159 100k
R154 100k
R151 100k
R153 100k
R161 470
R162 470
C148 10u
C149 10u
C151 10u
C141 10n
R140 15k
R142 100k
EL1
C147 100n
C146 100n
C144 100n
C143 330p
T114 BC547B
T113 BC547B
R110 15k
R11 75
L11 2.2uH
C11 390p
R12 68
R13 330
T12 BC547B
R14 1k
C14 100n
+12V
C18 1n
R16 75
L12 2.2uH
C16 390p
C111 10u
R113 470
C113 10u
C19 390p
C112 10n
C116 10u
C114 330p
R119 470
C118 10u
R19 100k
R112 100k
R116 100k
C117 10n
R17 100k
R18 1k
R111 470
R114 1k
R117 470
R118 100k
SCART1
CVBS
Y
CVBS
C
STA
L
L
R
R
+12V
R126 100
R127 1k
T11 BC547B
C137 100n
L15 2.2uH
C133 390p
R128 68
R131 75
R129 330
R132 390p
R133 75
R134 75
R136 100k
R137 75
C139 10u
C138 330p
R138 1k
R139 100k
R141 470
R143 1k
R144 100k
C142 10n
R147 100k
R146 470
SCART2
CVBS
CVBS
FB
R
G
STA
B
L
L
R
R

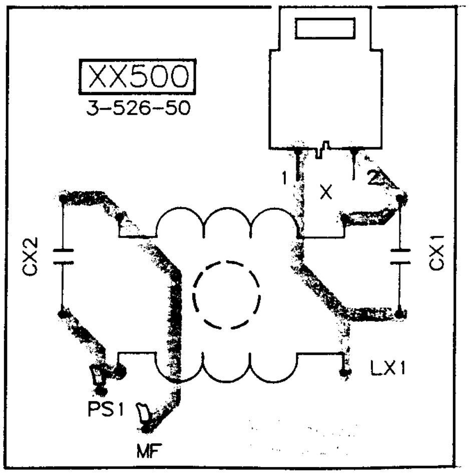
www.manualscenter.com

CONNECTION MODULE LL502

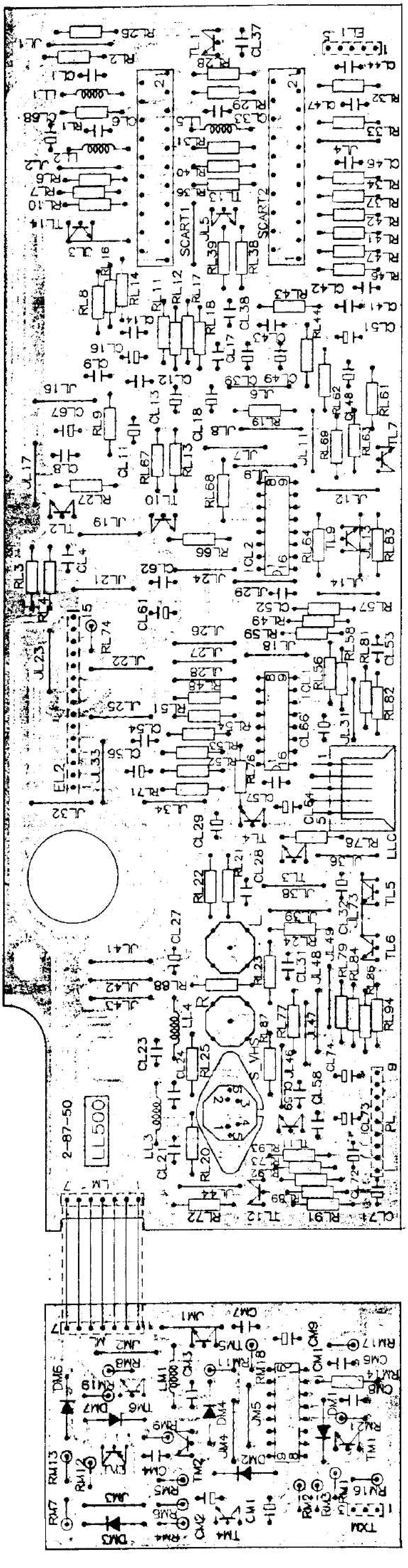

EL2
L11
2.2uH
C11
390p
R11
75
R12
68
R13
330
T12
BC547B
R14
1k
+12V
C14
100n
C132
10u
CVBS1
STA1
CVBS1/Y
+12V
C
L12
2.2uH
C16
390p
R16
75
C18
100n
R17
100k
R19
100k
T12
BC547B
R121 10k
C121
100n
R123
100k
R124
100k
R126
100k
R127
100k
C122
100n
C123
100u
R122 10k
T15
BC547B
C124
390p
C111
10u
C19
390p
C113
10u
R113
470
T13
BC547B
R129
1k
R131
1k
R134
1k
R138
0R68
R18
1k
R112
100k
C112
10n
R128
1k
T16
BC547B
C116
10u
R116
100k
C114
330p
T14
BC547B
R136
1k
R133
1k
R137
1k
C126
100u
R111 470
R114 1k
R117 470
R119
470
C118
10u
R118
100k
C117
10n
R132
1k
Cu27
10u
C128
10u
C129
10u
C131
10u
PL
LL502
62-60

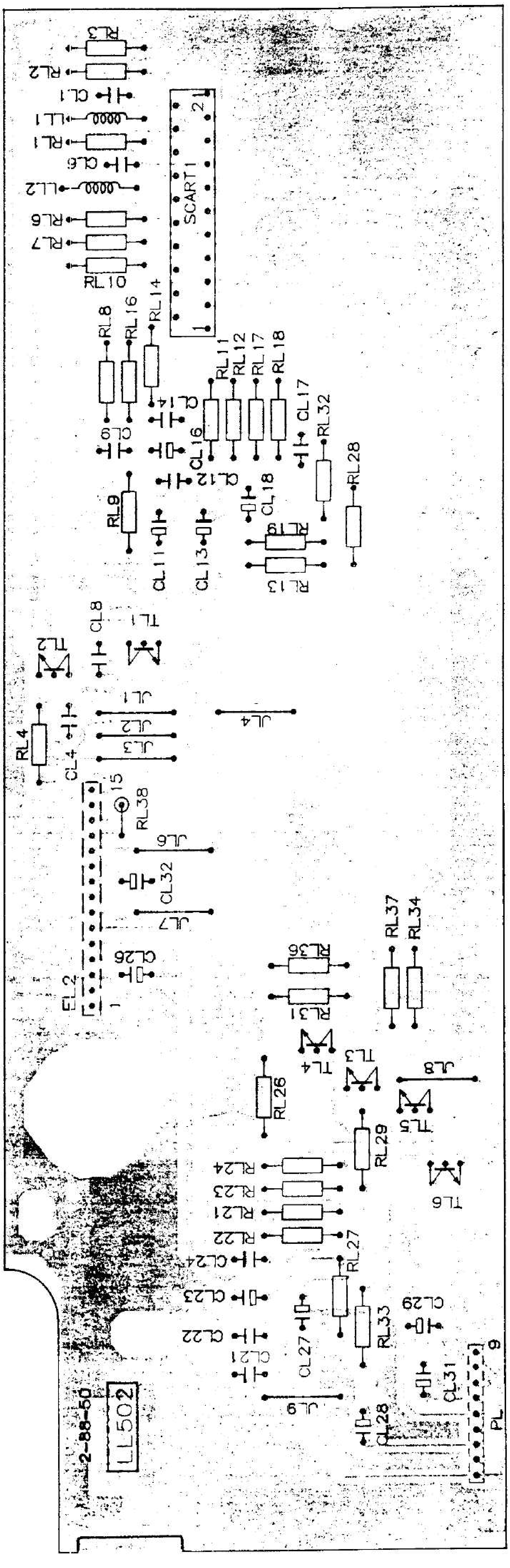
XX500


Lx1
B82724-A2142-N1
X_MS
1
2
Cx1
100n
250V ~
Cx2
100n
250V ~
xu1
xu2
XX500
64-92


XX500
3-526-50
1
X
2
CX2
CX1
LX1
PS1
MF

CONNECTION MODULE LL500 LL502


SCART1
SCART2
IC1
IC2
S_VHS
EL2
PL
LM
2-87-50
LL500
TXM


SCART1
EL2
PL
2-88-50
LL502

THE OTHER ADJUSTMENTS

Code	Adjustment	Note!
31	L/R Cross Talk	Apply right channel stereo signal. Connect an oscilloscope to the pin 14 of ICd3. Adjust the audio signal for minimum
35	Tuner AGC	Apply a 1 mV (60 dBµV) test signal. Adjust the picture just without noise.
38	Tuner AGC	Early production only.
38	Reference oscillators	Code selection corresponds to short circuit at pin 17 of ICe2. See "Reference oscillators" (page 12, step 2).
39	Y-delay control for Rf memory locations	
40	Y-delay control for Sat memory locations	
41	Y delay control for AV memory locations	

SERVICE ADJUSTMENTS

U POWER SUPPLY BLOCK

Supply voltage and protection circuit

1. Set brightness and contrast to normal level. Connect an universal voltmeter to the cathode of Du1.
2. Adjust with Pu2 the DC voltage for +138V (±2 V).

Z HORIZONTAL DEFLECTION BLOCK

Horizontal linearity

Adjust with Lz3.

Focusing

Set brightness and contrast to normal level. Use cross hatch pattern and adjust the picture for optimum resolution.

Screen grid voltage

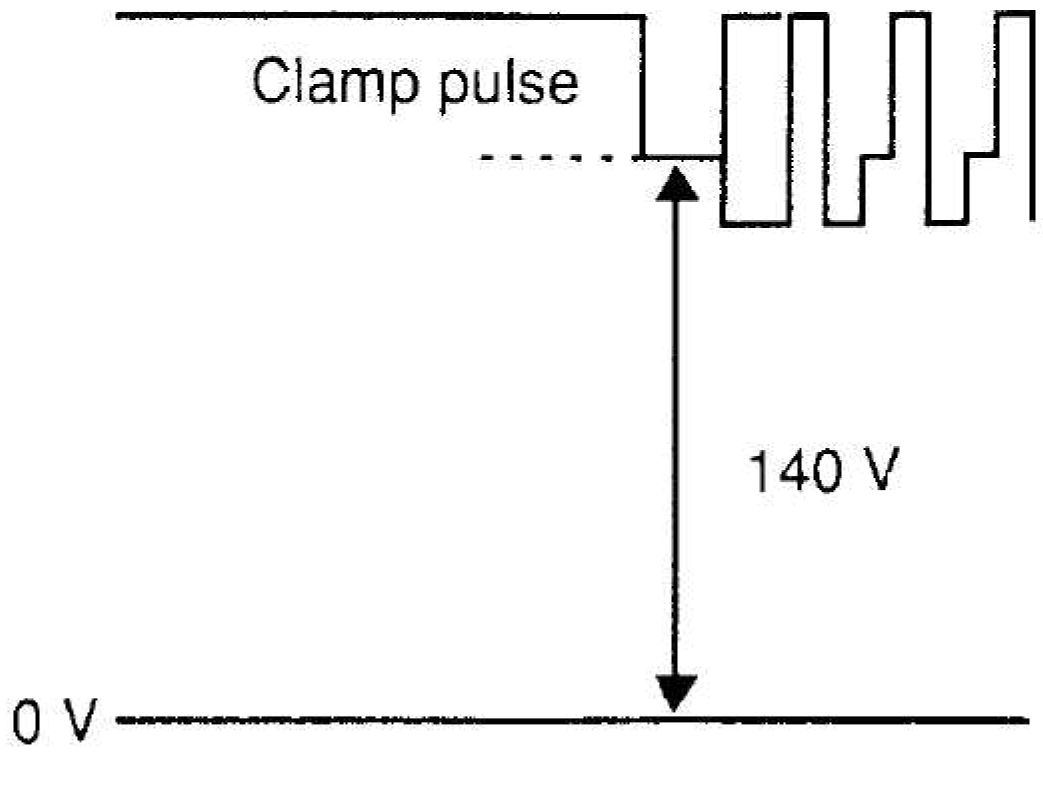
1. Set contrast to minimum, brightness and colour saturation to normal level.
2. Use an oscilloscope and control the amplitude of the inserted black level clamp pulses during 3 line periods after vertical blanking on the ICg1 output pins 9, 12 and 15 of the CRT Module (test points 71, 73 and 74).
3. Adjust with Ug2 (SCREEN) control the amplitude of the highest clamp pulse to +140V (see figure).

II PICTURE AND SOUND IF MODULE

IF filters (II501 module only)

1. Apply a L standard (AM sound) colour bar test signal.
2. Press the PRG button and after that the red button on the RC hand unit. Select the French channel table (L-standard) by entering e.g. 305 (= channel 05 of the channel table 3) with the number buttons.
3. Connect an oscilloscope to the pin 4 of ICi1.
4. Adjust with Li8, Li7 and Li6 the DC voltage for minimum.

Note! The French channel table stays valid until a new will be selected.



SERVICE ADJUSTMENTS VIA IIC BUS

Code	Min.	Approx. value	Max.	Adjustment	Note!
04				Configuration	
05		51		NVM version	
10	00	1F	3F	Line osc. frequency	Connect the pin 5 of ICh1 (TP28) to the ground before adjustment. If the software version is 10 or later the short circuit is NOT necessary.
24	00	x	3F	R gain	
25	00	x	3F	G gain	
26	00	x	3F	B gain	
27	00	x	3F	R reference	
28	00	x	3F	G reference	
29	00	x	3F	B reference	

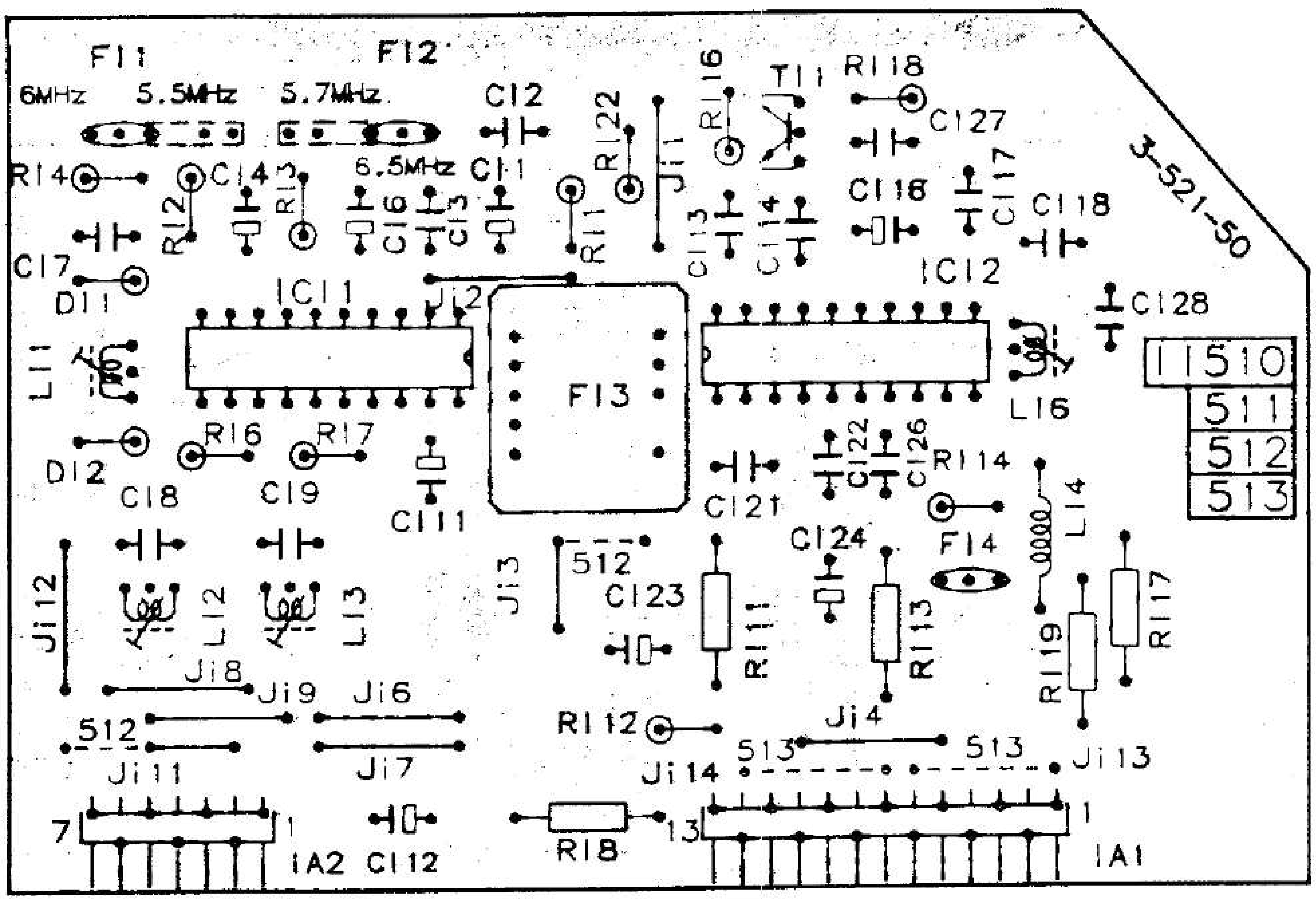
VERTICAL PICTURE ADJUSTMENTS

Code	Min.	Approx. value	Max.	Adjustment	Note!
12	00	1F	3F	Picture height	
16	00	x	1F	Height compensation	Set brightness and contrast to 20%. Select code 12 and adjust the picture height. Store the adjustment by pressing the blue button. Set brightness and contrast to 90%. Select code 16 and compensate the change in picture height. Store the adjustment by pressing the blue button.
13	00	1F	3F	Linearity	
14	00	1F	3F	S-correction	
15	00	1F	3F	Vertical shift	A basic adjustment according to the picture tube. Make only after chnaging a picture tube.
34	00	1F	3F	Vertical shift	

HORIZONTAL PICTURE ADJUSTMENTS

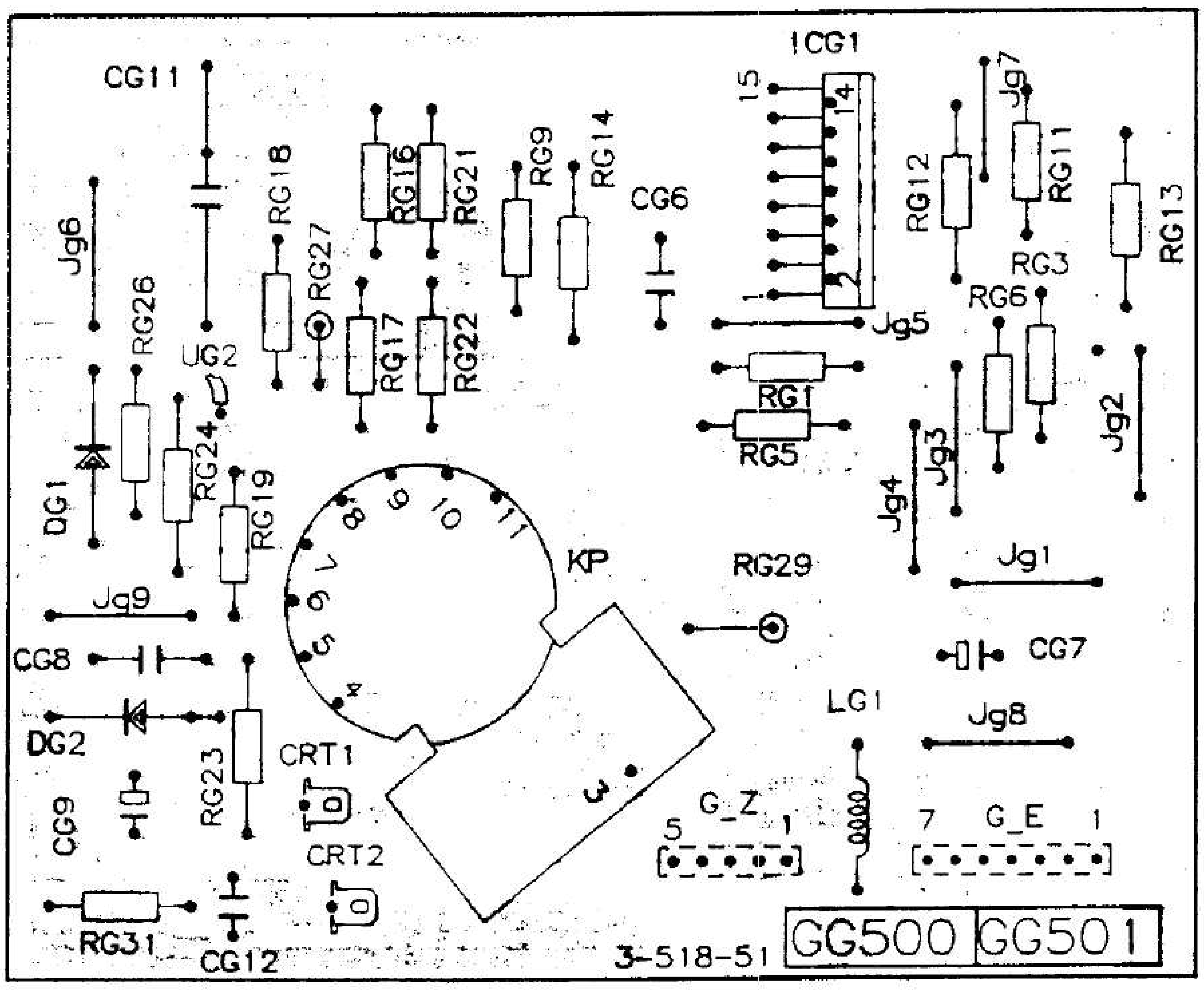
Code	Min.	Approx. value	Max.	Adjustment	Note!
17	00	1F	3F	Picture width	
21	00	x	1F	Width compensation	Set brightness and contrast to 20%. Select code 17 and adjust the picture width. Store the adjustment by pressing the blue button. Set brightness and contrast to 90%. Select code 21 and compensate the change in picture height. Store the adjustment by pressing the blue button.
11	00	1F	3F	Horizontal position	
18	00	1F	3F	Parabola	
19	00	1F	3F	Corners	
20	00	1F	3F	Trapezoidal correction	

IF-MODULE II510 II511

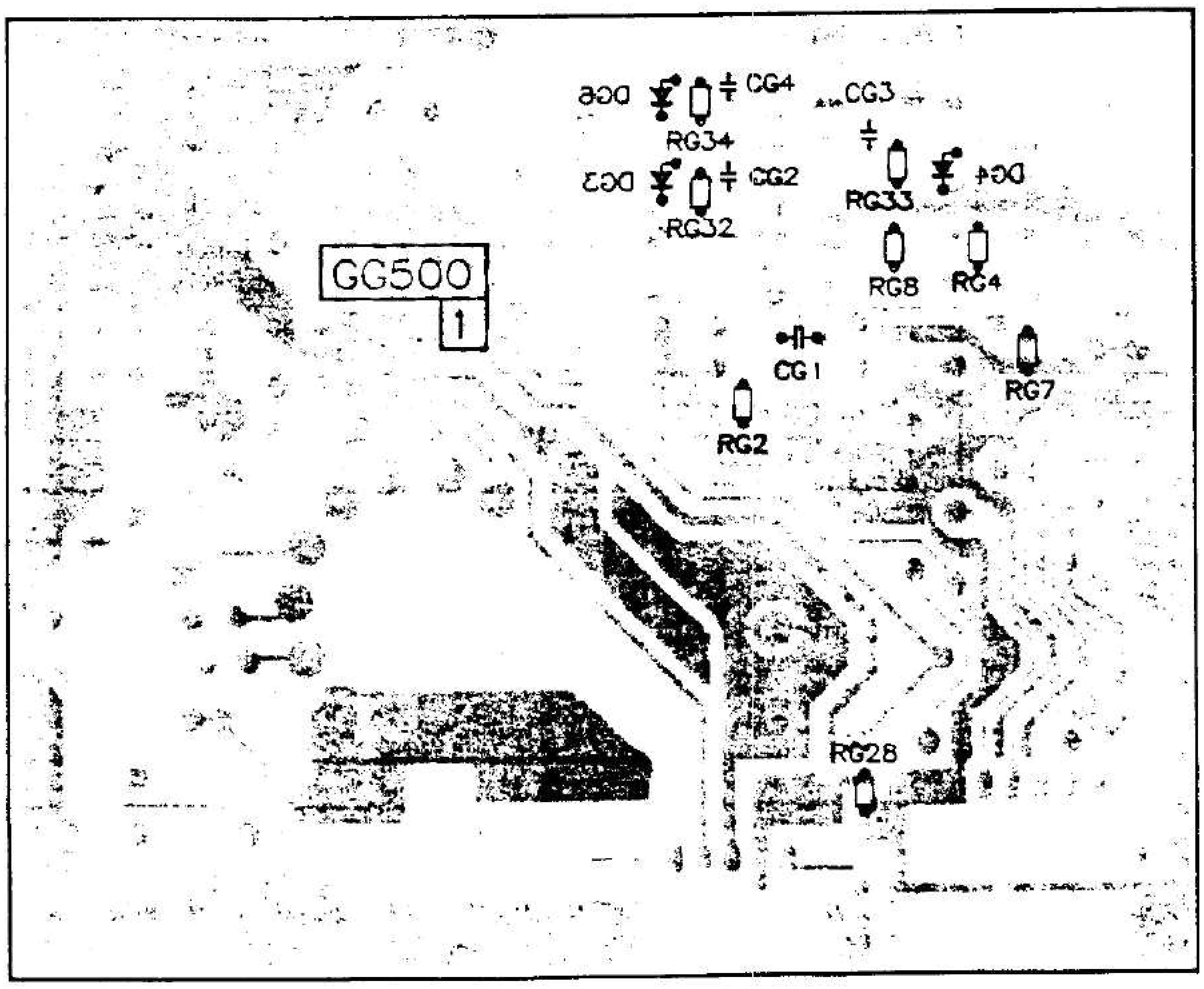


FI1
FI2
6MHz
5.5MHz
5.7MHz
6.5MHz
C12
C11
R14
C14
R13
R12
C16
C15
R122
R11
JI1
R116
T11
R118
C127
C116
C117
C118
C113
C114
C17
D11
IC11
Ji2
FI3
IC12
C128
II510
511
512
513
L11
L16
D12
R16
R17
C18
C19
C111
C121
C122
C126
R114
L14
Ji12
L12
L13
Ji3
512
C123
R111
C124
FI4
R113
R119
R117
Ji8
Ji9
Ji6
R112
Ji4
512
Ji11
Ji7
Ji14
513
513
Ji13
7
1
IA2
C112
R18
13
1
IA1
3-521-50

CRT MODULE GG500 GG501

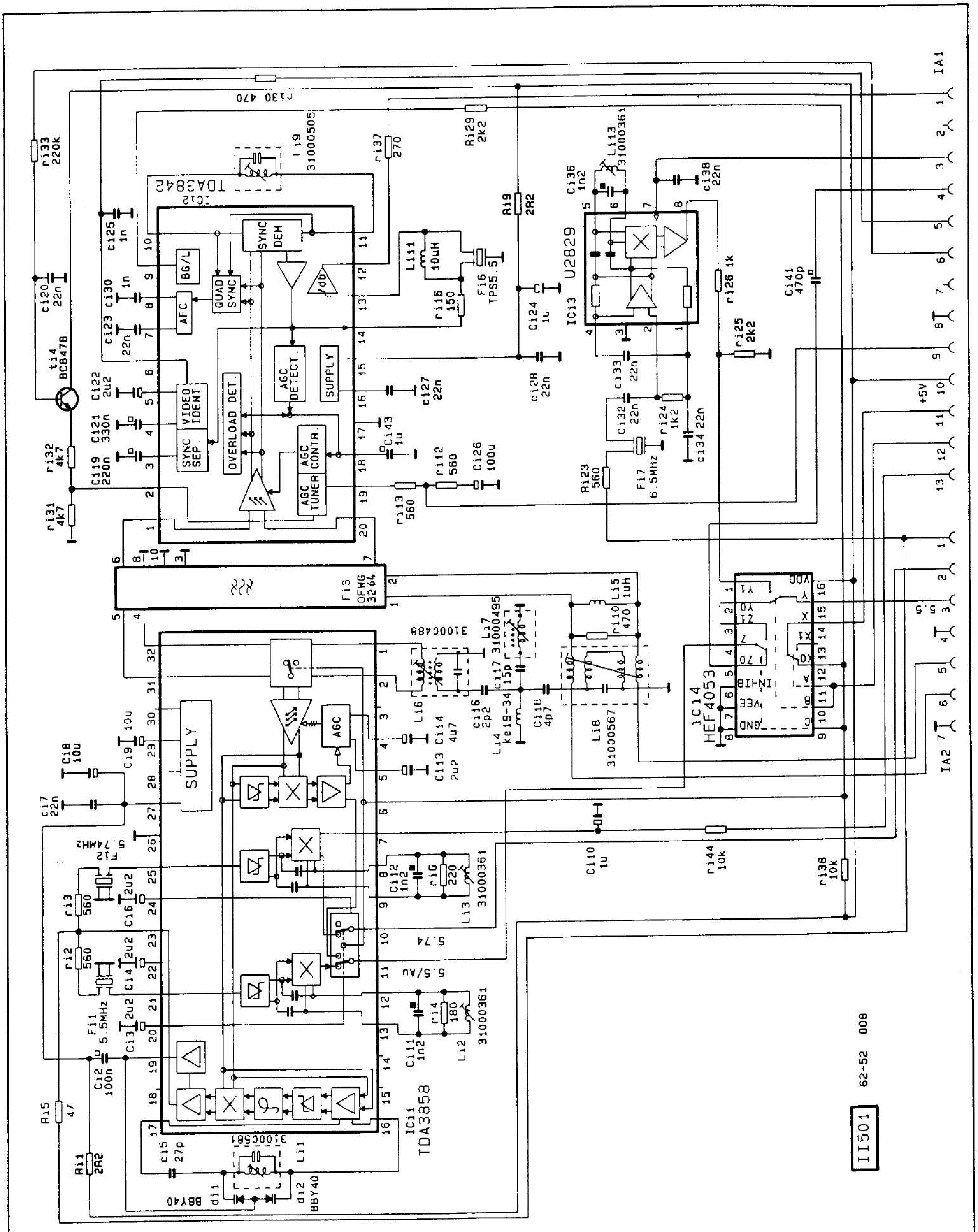


CG11
ICG1
15
14
Jg7
RG18
RG16
RG21
RG9
RG14
CG6
RG12
RG11
RG13
Jg6
RG27
RG3
RG26
RG17
RG22
2
1
Jg5
RG6
UG2
RG1
Jg2
RG5
Jg3
DG1
RG24
RG19
Jg4
9
10
11
8
7
6
5
4
3
KP
RG29
Jg1
Jg9
CG8
CG7
DG2
LG1
Jg8
CRT1
RG23
CG9
G_Z
5
1
7
G_E
1
CRT2
RG31
CG12
3-518-51
GG500
GG501

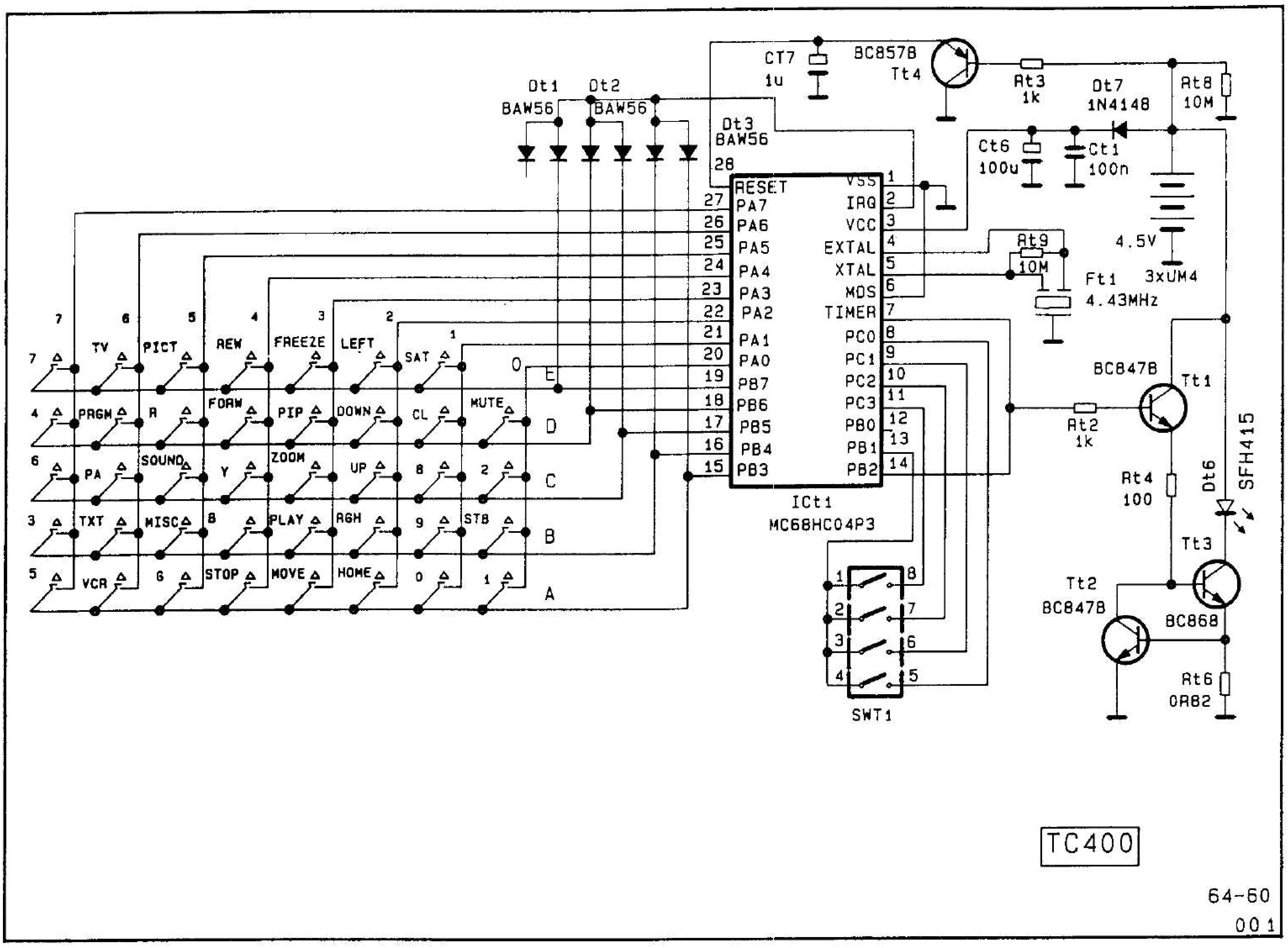


DG6
CG4
CG3
RG34
DG3
CG2
DG4
RG33
RG32
GG500
1
RG8
RG4
CG1
RG7
RG2
RG28

IF-MODULE II501

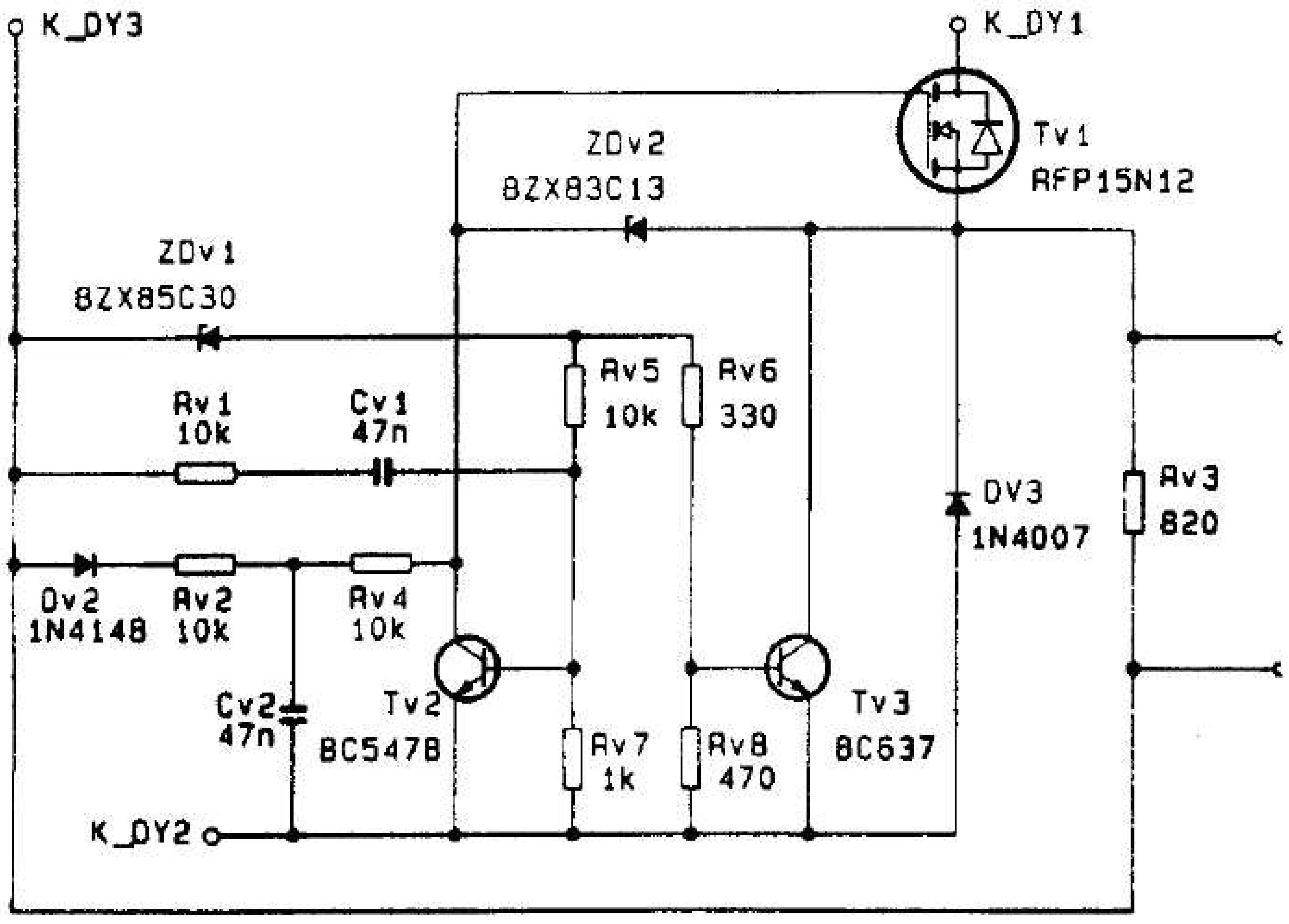

IC12 TDA3842
IC11 TDA3858
IC13 U2829
IC14 HEF4053
Fi3 OFWG 3264
IA1
IA2
+5V
SYNC DEM
BG/L
QUAD SYNC
AFC
VIDEO IDENT
SYNC SEP.
OVERLOAD DET.
AGC DETECT.
AGC CONTR.
AGC TUNER
SUPPLY
7db
AGC
VDD
VEE
GND
INHIB
ri30 470
ri33 220k
ri37 270
Ri29 2k2
R19 2R2
Li9 31000505
Li13 31000361
Ci36 1n2
Ci38 22n
Ci25 1n
Ci20 22n
Ci30 1n
Ci23 22n
ti4 BC847B
Ci22 2u2
Ci21 330n
Ci19 220n
ri32 4k7
ri31 4k7
Li11 10uH
ri16 150
Fi6 TPS5.5
Ci24 1u
Ci27 22n
Ci28 22n
Ci43 1u
ri12 560
Ci26 100u
ri13 560
ri26 1k
Ci41 470p
ri25 2k2
Ci33 22n
Ci32 22n
ri24 1k2
Ci34 22n
Ri23 560
Fi7 6.5MHz
Li5 1uH
ri10 470
Li7 31000495
Ci17 15p
Li6 31000488
Ci14 4u7
Ci16 2p2
Li4 ke19-34
Ci18 4p7
Li8 31000567
Ci13 2u2
Ci18 10u
Ci9 10u
Ci7 22n
Fi2 5.74MHz
ri3 560
Ci6 2u2
Ci12 1n2
ri6 220
Li3 31000361
Ci10 1u
ri44 10k
ri38 10k
5.74
5.5/Au
ri2 560
Ci4 2u2
Fi1 5.5MHz
Ci3 2u2
Ci2 100n
Ci11 1n2
ri4 180
Li2 31000361
R15 47
Ri1 2R2
Ci5 27p
Li1 31000581
di1 BBY40
di2 BBY40
5.5
II501
62-52 008

REMOTE CONTROL TC400


CT7
1u
BC857B
Tt4
Rt3
1k
Dt7
1N4148
Rt8
10M
Dt1
BAW56
Dt2
BAW56
Dt3
BAW56
Ct6
100u
Ct1
100n
4.5V
3xUM4
Rt9
10M
Ft1
4.43MHz
RESET
PA7
PA6
PA5
PA4
PA3
PA2
PA1
PA0
PB7
PB6
PB5
PB4
PB3
VSS
IRQ
VCC
EXTAL
XTAL
MDS
TIMER
PC0
PC1
PC2
PC3
PB0
PB1
PB2
ICt1
MC68HC04P3
BC847B
Tt1
Rt2
1k
Rt4
100
Dt6
SFH415
Tt3
Tt2
BC847B
BC868
Rt6
0R82
SWT1
TV
PICT
REW
FREEZE
LEFT
SAT
PRGM
R
FORW
PIP
DOWN
CL
MUTE
SOUND
PA
Y
ZOOM
UP
TXT
MISC
PLAY
RGH
STB
VCR
STOP
MOVE
HOME
0
E
D
C
B
A
TC400
64-60
001

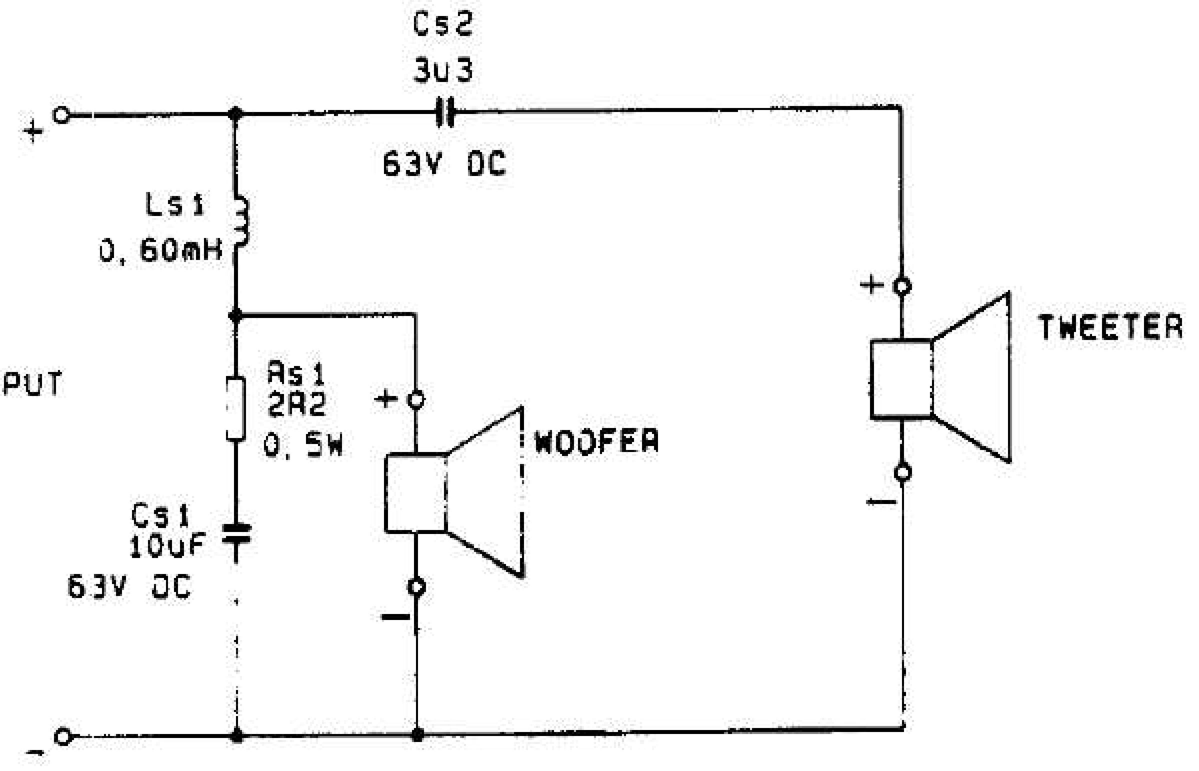
VS500

SS500


K_DY3
K_DY1
K_DY2
ZDv2
BZX83C13
Tv1
RFP15N12
ZDv1
BZX85C30
Rv5
10k
Rv6
330
Rv1
10k
Cv1
47n
DV3
1N4007
Rv3
820
Dv2
1N4148
Rv2
10k
Rv4
10k
Cv2
47n
Tv2
BC547B
Rv7
1k
Rv8
470
Tv3
BC637

VS500

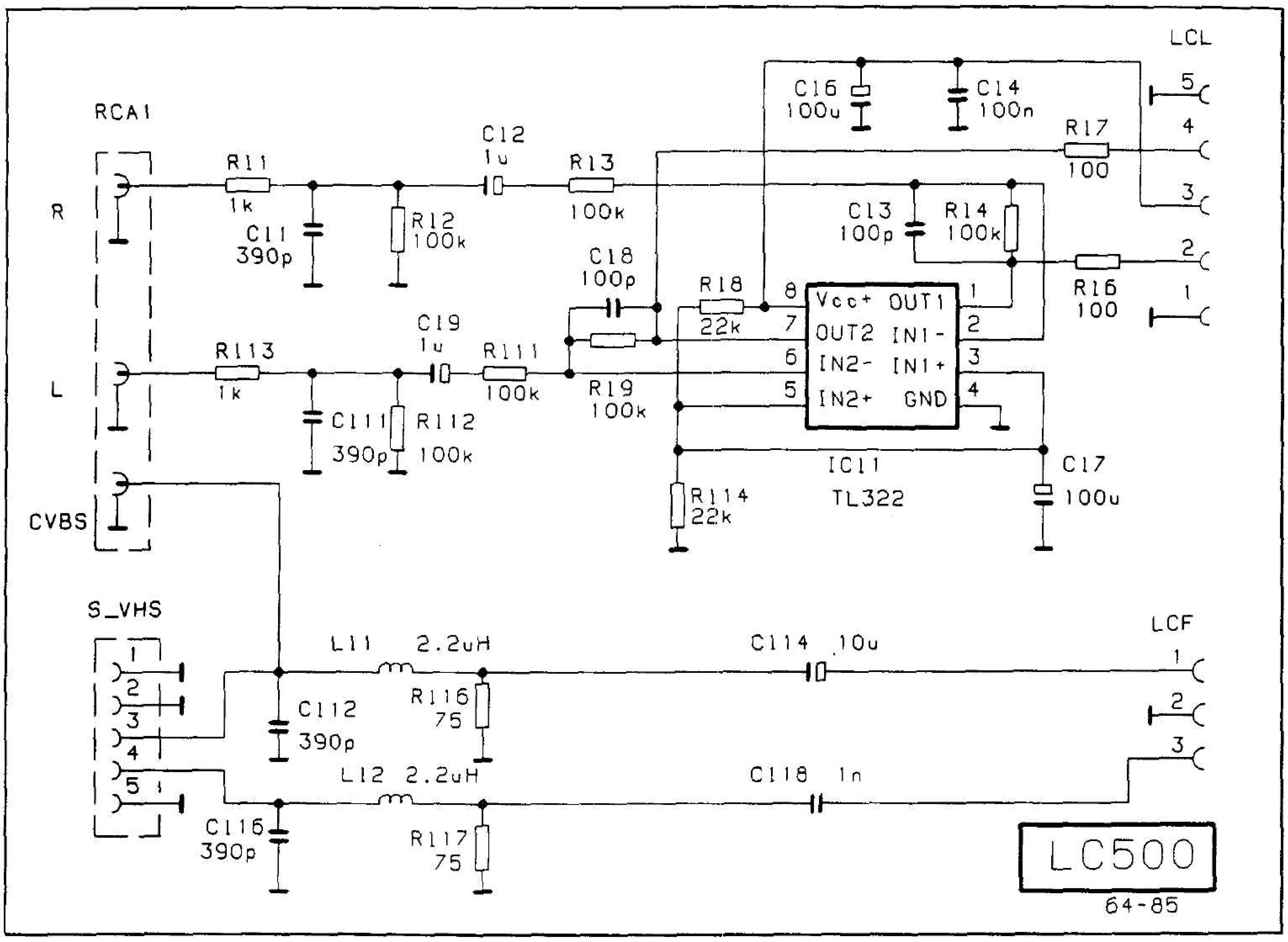
64-95
001

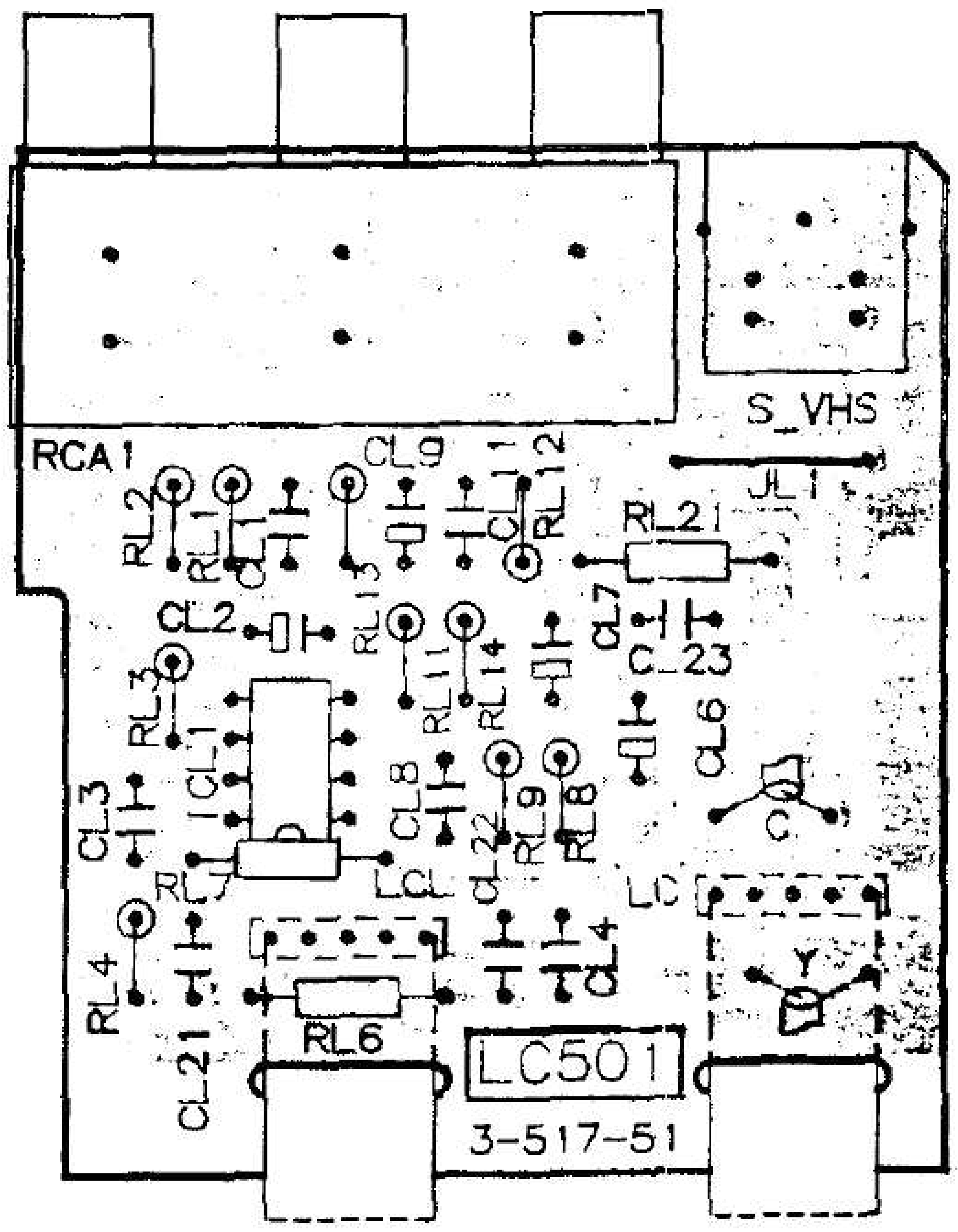

Cs2
3u3
63V DC
+
Ls1
0,60mH
INPUT
Rs1
2R2
0,5W
Cs1
10uF
63V DC
WOOFER
TWEETER
-

SS500

64-93

CONNECTION MODULE LC500 LC501


RCA1
R
L
CVBS
R11
1k
C11
390p
R12
100k
C12
1u
R13
100k
C16
100u
C14
100n
R17
100
C13
100p
R14
100k
R16
100
C18
100p
R18
22k
R113
1k
C111
390p
R112
100k
C19
1u
R111
100k
R19
100k
R114
22k
Vcc+
OUT1
OUT2
IN1-
IN2-
IN1+
IN2+
GND
IC11
TL322
C17
100u
LCL
S_VHS
L11 2.2uH
C112
390p
R116
75
C114 10u
LCF
L12 2.2uH
C116
390p
R117
75
C118 1n
LC500
64-85


RCA1
S_VHS
RL2
RL1
CL1
CL9
CL11
RL12
RL21
JL1
CL2
RL13
RL11
RL14
CL7
CL1
CL23
RL3
ICL1
CL6
CL3
CL8
CL22
RL9
RL8
C
RL7
LCL
LC
RL4
Y
CL21
RL6
CL4
LC501
3-517-51

Video demodulator

1. Apply a colour bar test signal (1mV = 60 dBµV). Generator tuned for some channel 7...11 in VHF III band.

2. Adjust with Li6 (II501, Li9) grey areas to equal grey, the crossings on both sides of white vertical line to symmetric without oscillations and the change from black to white without reflections.

Tuner AGC

See service adjustments via IIC, Code 35.

Quasi split sound demodulator

1. Apply a CCIR B/G standard (FM modulated sound) test signal.

2. Connect an oscilloscope to the module pin 14

3. Adjust with Li1 the video modulation for minimum.

Sound demodulators 5,5 (/5,74 MHz , II510)

1. Apply a test signal with modulated 5,5/5,74 MHz stereo carriers according to A2 standard.

2. Connect an oscilloscope to the TP2.

3. Adjust with Li2 the audio signal for maximum without distortion.

4. Connect the oscilloscope to the TP3.

5. Adjust with Li3 the audio signal for maximum without distortion.

Crosstalk attenuation

See service adjustments via IIC (Code 31).

Sound demodulator 6,5 MHz (II501 module only)

1. Apply a test signal with modulated 6,5 MHz sound carrier.

2. Press the PRG button and the red on the RC hand unit and select the East-European channel table (OIRT) by entering e.g. 205 (= channel 05 of the channel table 2) with the number buttons.

3. Connect an oscilloscope to the TP2.

4. Adjust with Li13 the audio signal for maximum without distortion.

Note! The East-European channel table stays valid until a new will be selected.

E COLOUR DECODER BLOCK

Reference oscillators

1. Connect a PAL colour bar test signal.

2. Remove jumpper Je19 and connect pin 17 of ICe2 to the ground.
   Note! Jumper removal and short circuit are NOT necessary if the µP software version is 10 or later. See service adjustments via IIC (Code 38).

3. Adjust colours straight with Ce19.

4. Connect a 3,58 MHz NTSC colour bar test signal via Scart connector. (For the NTSC models only)

5. Adjust colours straight with Ce18.

6. Remove the link, connect the jumpper Je 19 and check that the colours stay on their own places.

SECAM colour filter

1. Connect a SECAM colour bar test signal.

2. Connect an oscilloscope to the pins 1 (R-Y) and 3 (B-Y) of ICe2, test points 18 and 17.

3. Adjust with Le2 so that pattern is equal at the R-Y and B-Y outputs.

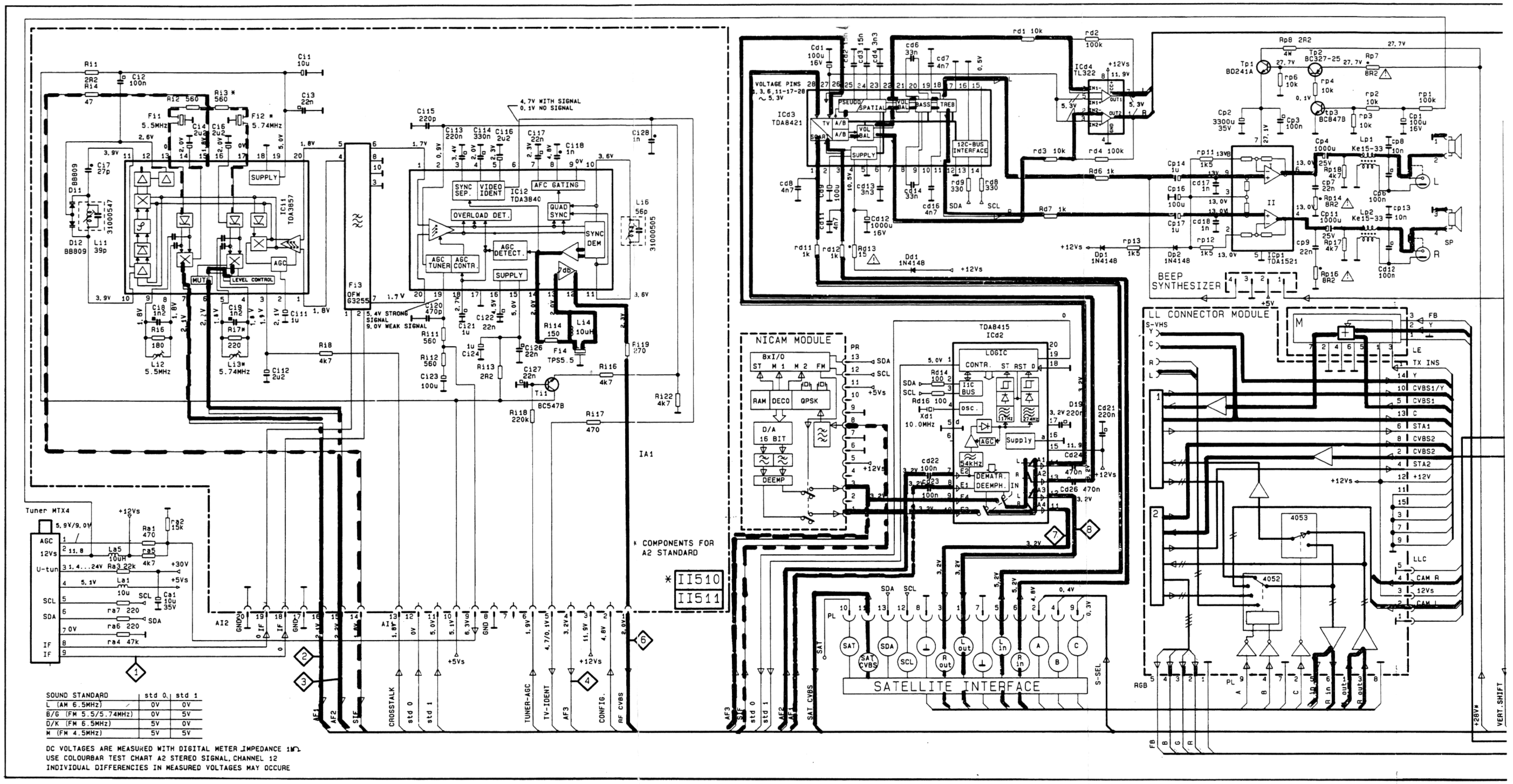
SECAM demodulator

1. Connections as above.

2. Adjust with Le1 and Pe1 so that the uncoloured parts of the test chart are uncoloured.

3. Remove the measuring cables.

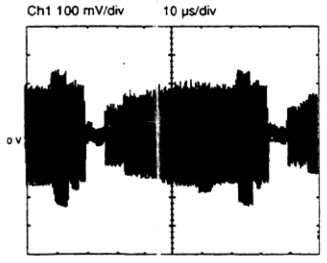
4. Fine adjust colours equal and edges of the colours sharp with Le2.


Tuner MTX4
TDA3857
IC11
TDA3840
IC12
OFW G3255
Fi3
BC547B
Ti1
TPS5.5
Fi4
IA1
* COMPONENTS FOR A2 STANDARD
II510
II511
VOLTAGE PINS 28 1,3,6,11-17-28 ~5.3V
ICd3
TDA8421
I2C-BUS INTERFACE
TL322
ICd4
BD241A
Tp1
BC327-25
Tp2
BC847B
Tp3
TDA1521
ICp1
BEEP SYNTHESIZER
NICAM MODULE
8xI/O
RAM
DECO
QPSK
D/A 16 BIT
DEEMP
TDA8415
ICd2
LOGIC
CONTR.
Supply
DEMATR.
DEEMPH.
LL CONNECTOR MODULE
S-VHS
4053
4052
SATELLITE INTERFACE
AF1
AF2
SIF
CROSSTALK
std 0
std 1
TUNER-AGC
TV-IDENT
AF3
CONFIG.
RF CVBS
SAT CVBS
S-SEL
RGB
FB
B
G
R
+28V*
VERT.SHIFT
SP
L
R

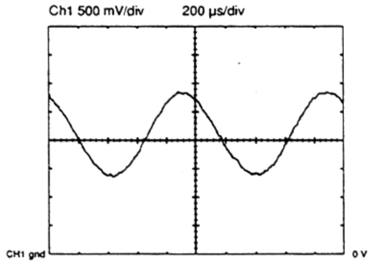
SOUND STANDARD	std 0	std 1
L (AM 6.5MHz)	0V	0V
B/G (FM 5.5/5.74MHz)	0V	5V
D/K (FM 6.5MHz)	5V	0V
M (FM 4.5MHz)	5V	5V

DC VOLTAGES ARE MEASURED WITH DIGITAL METER IMPEDANCE 1MΩ
USE COLOURBAR TEST CHART A2 STEREO SIGNAL, CHANNEL 12
INDIVIDUAL DIFFERENCIES IN MEASURED VOLTAGES MAY OCCURE

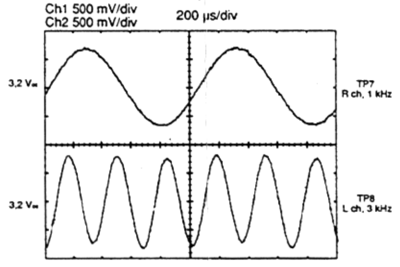
TP1



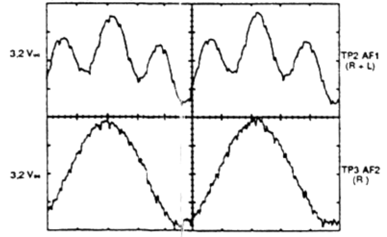
TP4, AM sound



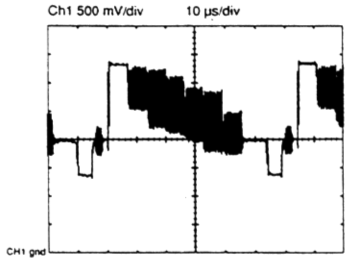
TP7 and TP8, A2 Stereo



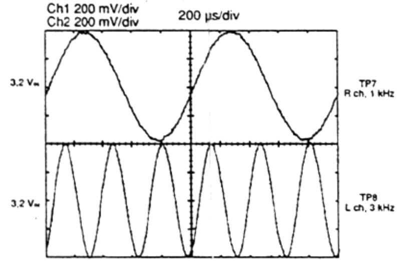
TP2 and TP3, Stereo signal

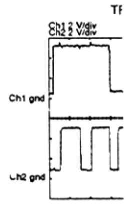


TP6

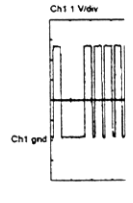


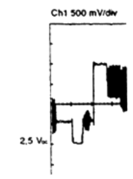
TP7 and TP8, NICAM Stereo



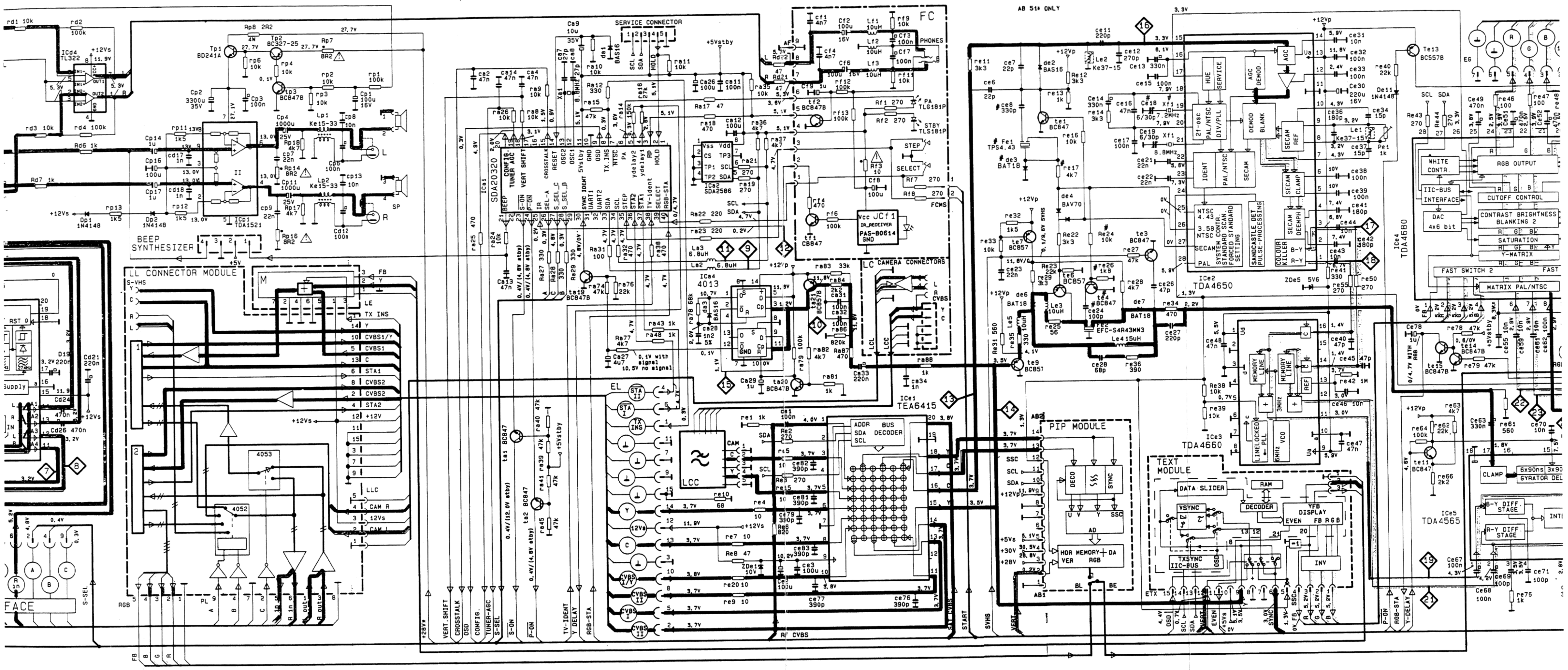


TP12, T

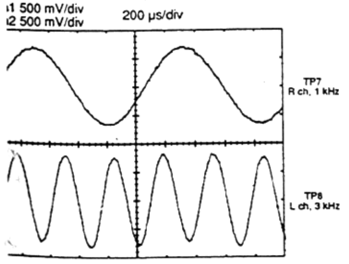




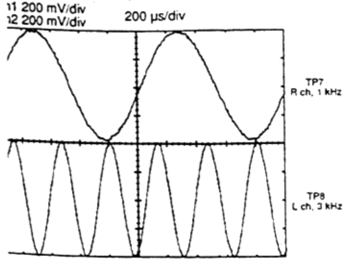
10-91 83601599


# COMPONENTS FOR NTSC 3.58 VIA SCART
AB 51# ONLY
SERVICE CONNECTOR
FC
PHONES
BEEP SYNTHESIZER
LL CONNECTOR MODULE
S-VHS
SDA20320
ICa2 SDA2586
ICa4 4013
ICp1 TDA1521
ICd4 TL322
LCC
LC CAMERA CONNECTORS
ICe1 TEA6415
ADDR BUS SDA DECODER SCL
PIP MODULE
DECO
SYNC
HOR MEMORY+DA VER RGB
TEXT MODULE
DATA SLICER
VSYNC
DECODER
RAM
YFB DISPLAY EVEN FB R G B
TXSYNC IIC-BUS
INV
ICe2 TDA4650
ICe3 TDA4660
ICe4 TDA4680
ICe5 TDA4565
HUE
SERVICE
AGC DEMOD.
DEMOD
BLANK
SECAM REF
IDENT
PAL/NTSC
SECAM
NTSC 4.43 3.58 NTSC SECAM PAL
SYSTEM CONTR. STANDARD SCAN. FORCED STANDARD SETTING
SANDCASTLE DET PULSE-PROCESSING
COLOUR KILLER
SECAM CLAMP
SECAM DEEMPH
MEMORY LINE
LINELOCKED PLL
VCO
WHITE CONTR.
IIC-BUS INTERFACE
DAC 4x6 bit
RGB OUTPUT
CUTOFF CONTROL
CONTRAST BRIGHTNESS BLANKING 2
SATURATION
Y-MATRIX
FAST SWITCH 2
MATRIX PAL/NTSC
CLAMP
6x90ns 3x90 GYRATOR DEL
B-Y DIFF STAGE
R-Y DIFF STAGE
FACE
RGB
S-SEL
+28V
VERT.SHIFT
CROSSTALK
OSD
CONFIG.
TUNER-AGC
S-SEL
S-ON
P-ON
TV-IDENT
Y DELAY
RGB-STA
RF CVBS
SVHS
START
VERT
SVHS
P-ON
RGB-STA
Y-DELAY

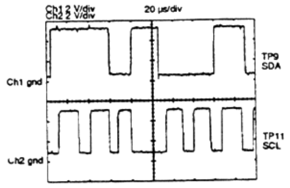
TP7 and TP8, A2 Stereo



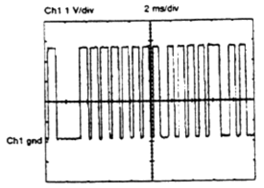
TP7 and TP8, NICAM Stereo



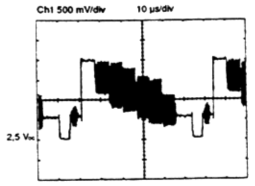
TP9 and TP11



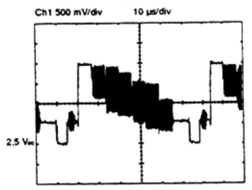
TP12, TV button depressed



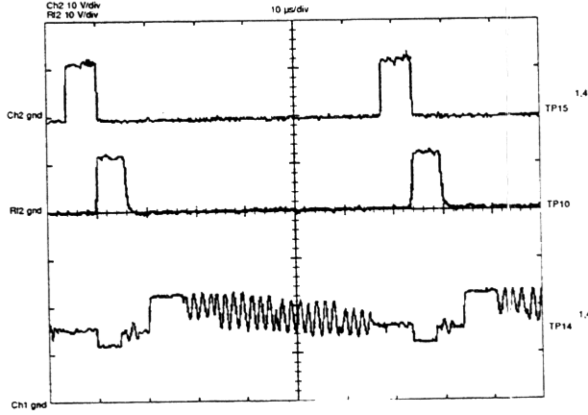
TP13



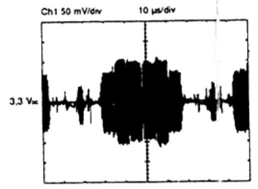
TP14



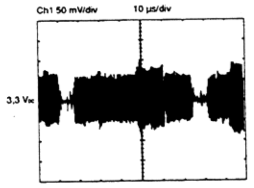
TP10, TP14 and TP15



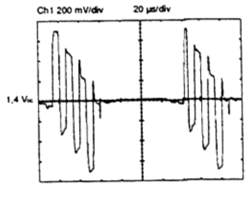
TP16 PAL



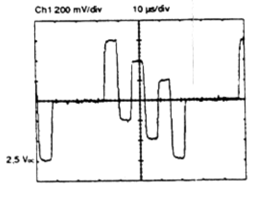
TP16 SECAM



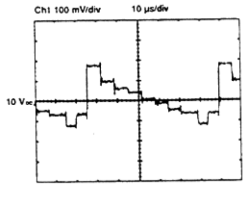
TP17 SECAM



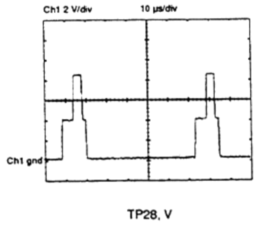
TP21



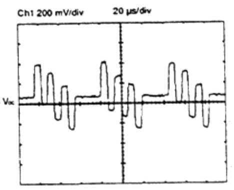
TP24



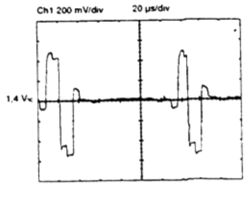
TP27, H



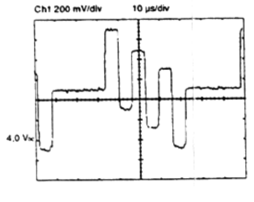
TP17 PAL



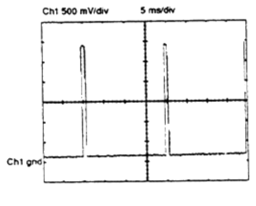
TP18 SECAM



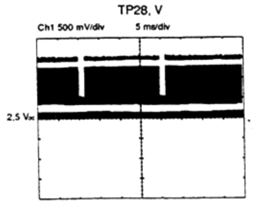
TP22

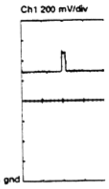


TP26

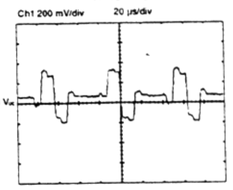


TP28, V

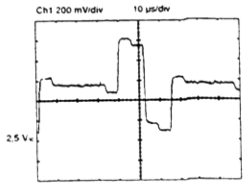




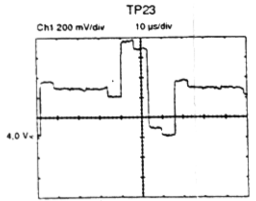
TP18 PAL



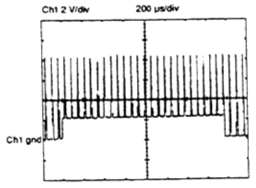
TP19



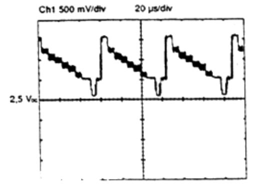
TP23

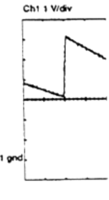


TP27, V

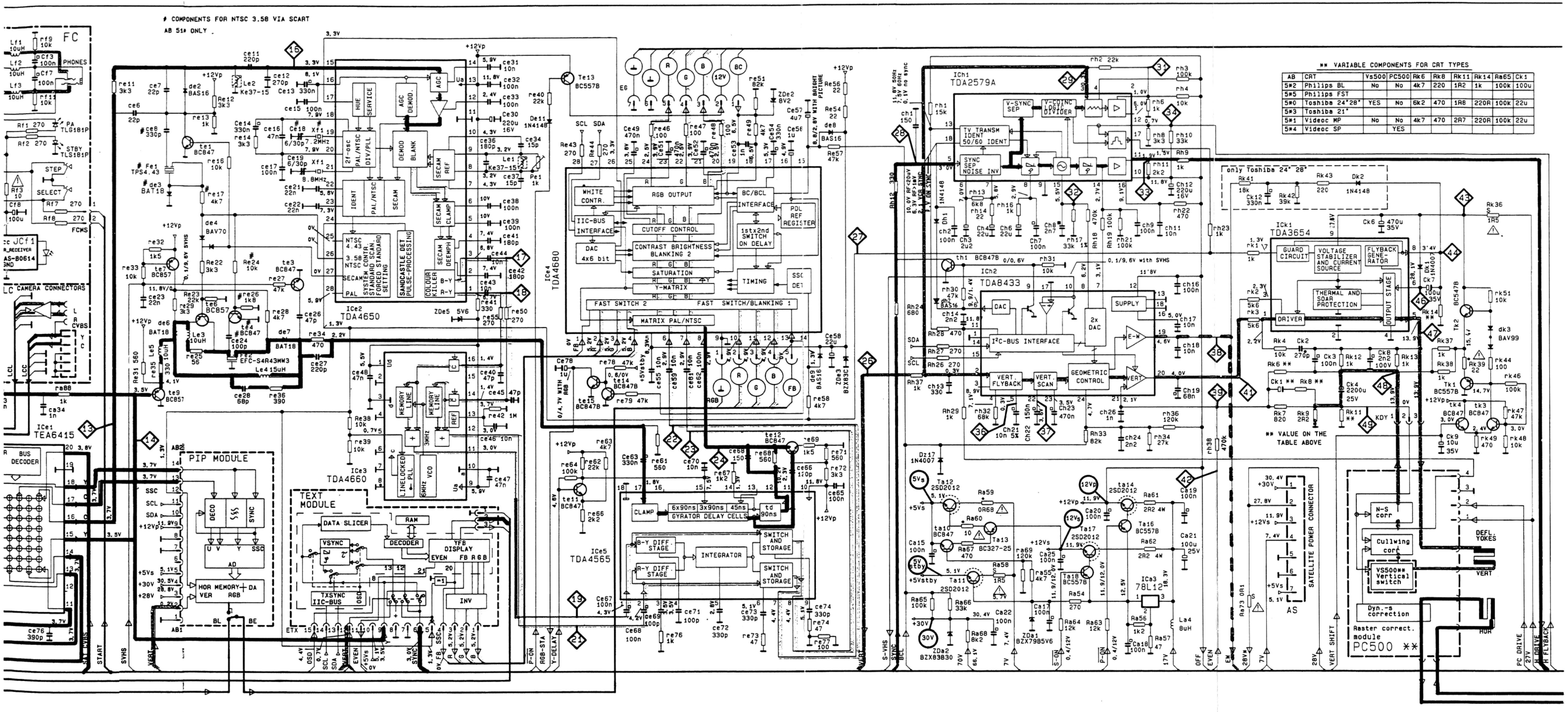


TP28, H



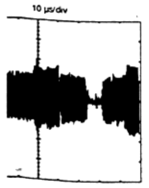


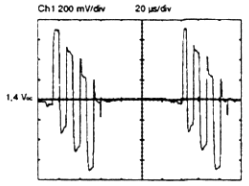
COMPONENTS FOR NTSC 3.58 VIA SCART
AB 51# ONLY

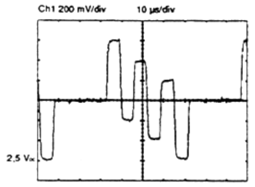

FC
PHONES
PA TLG181P
STBY TLS181P
STEP
SELECT
FCMS
JCf1 RECEIVER AS-B0614
CAMERA CONNECTORS
CVBS
ICe1 TEA6415
BUS DECODER
PIP MODULE
DECO
SYNC
AD
HOR MEMORY
VER
DA
RGB
TEXT MODULE
DATA SLICER
RAM
VSYNC
DECODER
DISPLAY
TXSYNC IIC-BUS
INV
ICe2 TDA4650
HUE
SERVICE
AGC DEMOD.
AGC
2f-osc PAL/NTSC DIV/PLL
DEMOD BLANK
SECAM REF
IDENT
PAL/NTSC
SECAM
SECAM CLAMP
SECAM DEEMPH
NTSC 4.43
3.58 NTSC
SYSTEM CONTR. STANDARD SEARCH FORCED STANDARD SETTING
SANDCASTLE DET PULSE-PROCESSING
COLOUR KILLER
ICe3 TDA4660
MEMORY LINE
REF
VCO
LINELOCKED PLL
ICe4 TDA4680
WHITE CONTR.
IIC-BUS INTERFACE
DAC 4x6 bit
RGB OUTPUT
CUTOFF CONTROL
CONTRAST BRIGHTNESS BLANKING 2
SATURATION
Y-MATRIX
FAST SWITCH 2
FAST SWITCH/BLANKING 1
MATRIX PAL/NTSC
BC/BCL INTERFACE
PDL REF REGISTER
1stx2nd SWITCH ON DELAY
TIMING
SSC DET
ICe5 TDA4565
CLAMP
6x90ns 3x90ns 45ns
GYRATOR DELAY CELLS
td 90ns
B-Y DIFF STAGE
R-Y DIFF STAGE
INTEGRATOR
SWITCH AND STORAGE
ICh1 TDA2579A
V-SYNC SEP
V-COINC LOGIC DIVIDER
TV TRANSM IDENT 50/60 IDENT
SYNC SEP NOISE INV
ICh2 TDA8433
DAC
SUPPLY
2x DAC
I2C-BUS INTERFACE
VERT. FLYBACK
VERT. SCAN
GEOMETRIC CONTROL
E-W
VERT
only Toshiba 24" 28"
ICk1 TDA3654
GUARD CIRCUIT
VOLTAGE STABILIZER AND CURRENT SOURCE
FLYBACK GENERATOR
THERMAL AND SOAR PROTECTION
OUTPUT STAGE
DRIVER
** VALUE ON THE TABLE ABOVE
KDY
SATELLITE POWER CONNECTOR
AS
N-S corr
Cullwing corr
VS500** Vertical switch
Dyn.-s correction
Raster correct. module PC500 **
DEFL. YOKES
VERT
HOR
ICa3 78L12
2SD2012
BC327-25
BZX79B5V6
BZX83B30
PC DRIVE
H DRIVE
H FLYBACK
VERT SHIFT
S-VHS
SYNC
SVHS
START
VERT

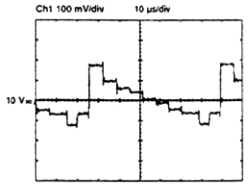
** VARIABLE COMPONENTS FOR CRT TYPES

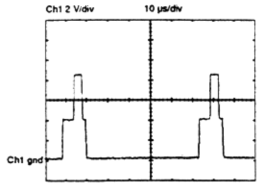
AB	CRT	Vs500	PC500	Rk6	Rk8	Rk11	Rk14	Ra65	Ck1
5*2	Philips BL	No	No	4k7	220	1R2	1k	100k	100u
5*5	Philips FST								
5*0	Toshiba 24"28"	YES	No	6k2	470	1R8	220R	100k	22u
5*3	Toshiba 21"								
5*1	Videoc MP	No	No	4k7	470	2R7	220R	100k	22u
5*4	Videoc SP		YES						

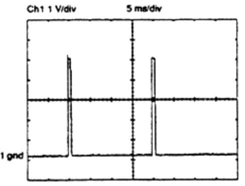
P16 SECAM


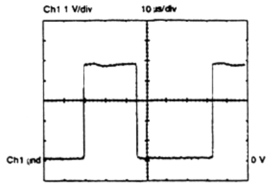
TP17 SECAM


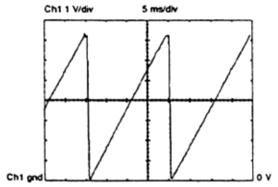
TP21


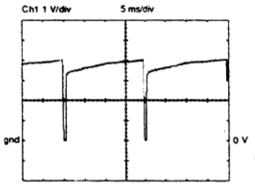
TP24


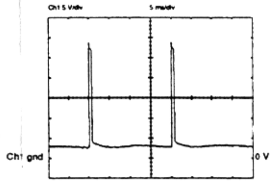
TP27, H


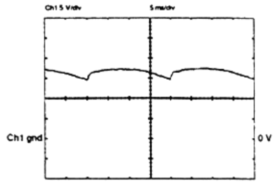
TP29 V


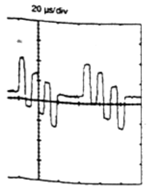
TP33 H


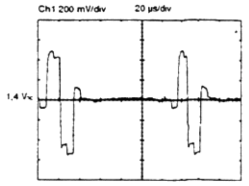
TP37 V


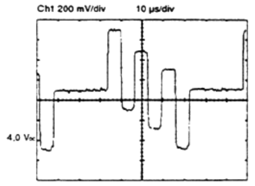
TP41 V


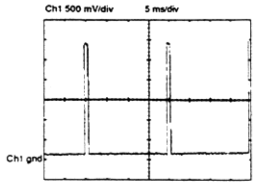
TP44 V


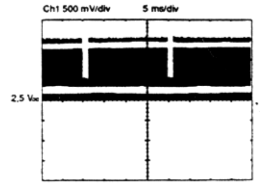
TP48 V


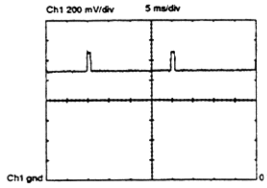
TP17 PAL


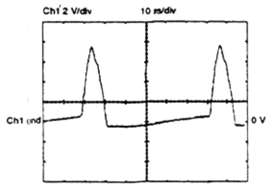
TP18 SECAM


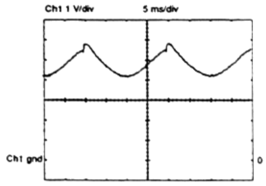
TP22


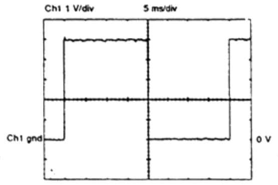
TP26


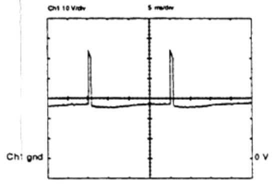
TP28, V


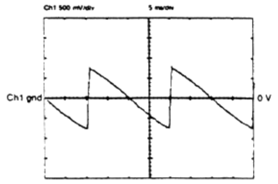
TP31 V


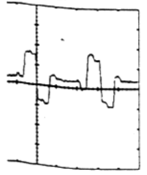
TP34H


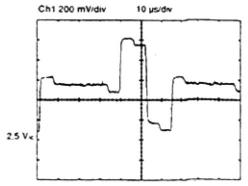
TP38 V


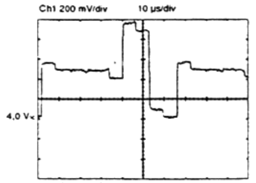
TP42 V


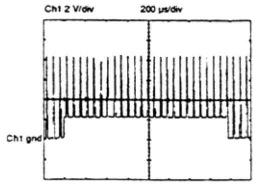
TP46 V


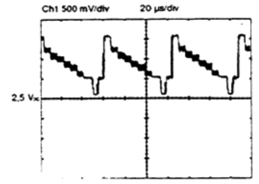
TP49 V


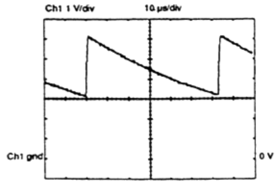
TP18 PAL


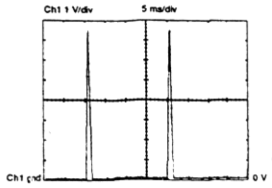
TP19


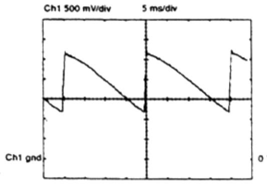
TP23


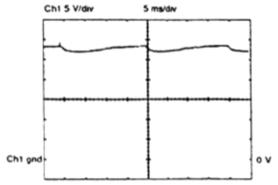
TP27, V


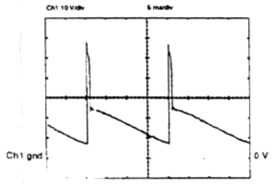
TP28, H


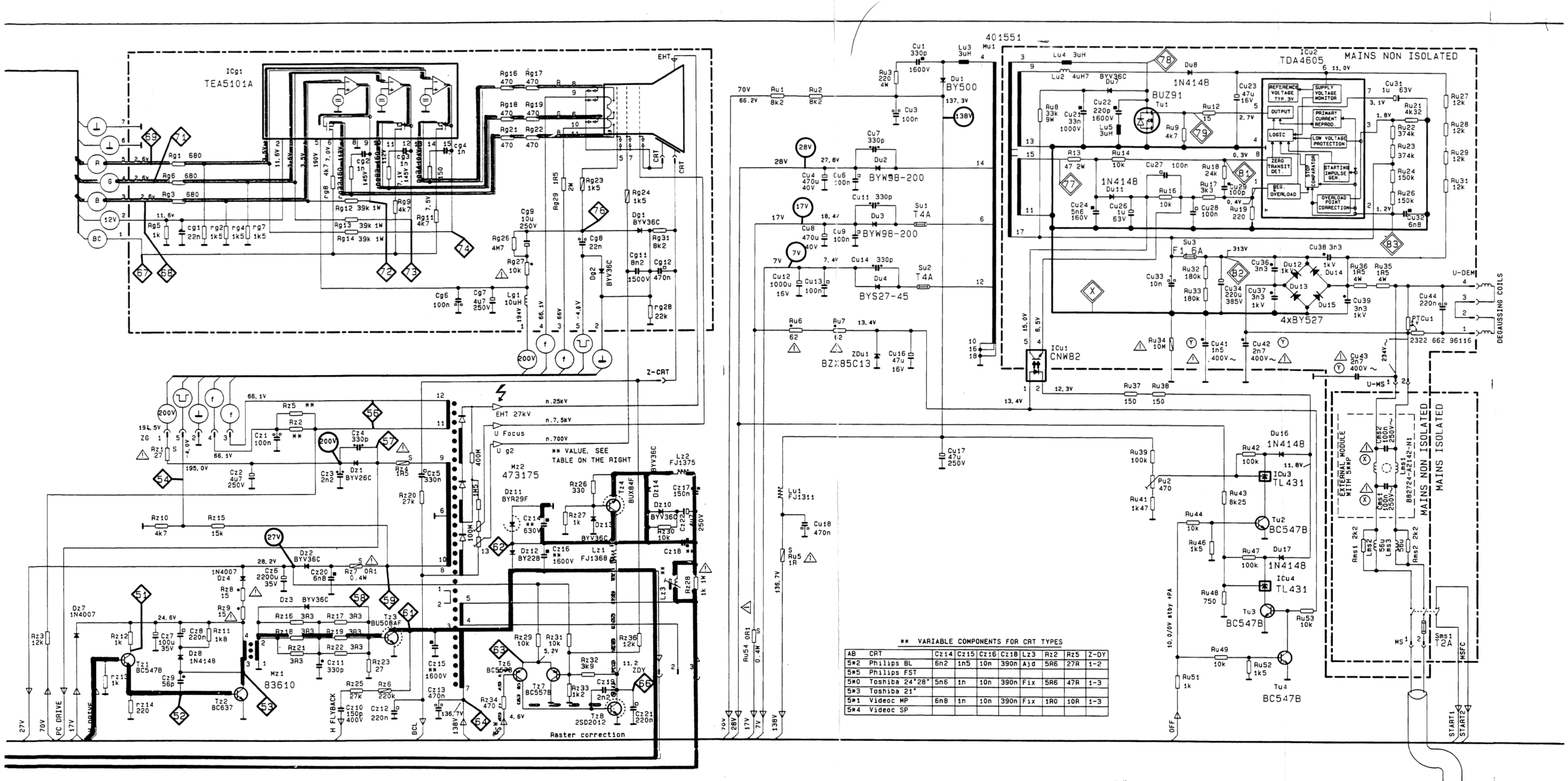
TP32 H


TP36 V


TP39 V


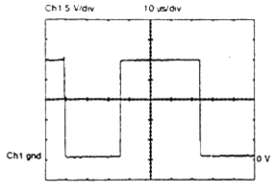
TP43 V


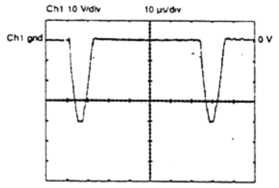
TP47 V


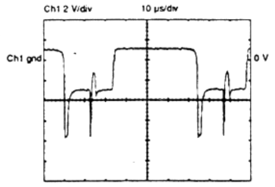

401551
ICg1
TEA5101A
EHT
CRT
Rg16 470
Rg17 470
Rg18 470
Rg19 470
Rg21 470
Rg22 470
Rg1 680
Rg6 680
Rg3 680
R
G
B
12V
BC
Rg5 1k
cg1 22n
rg2 1k5
rg4 1k5
rg7 1k5
Rg12 39k 1W
Rg13 39k 1W
Rg14 39k 1W
Rg9 4k7
Rg11 4k7
Rg23 1k5
Rg24 1k5
Dg1 BYV36C
Rg31 8k2
Cg8 22n
Cg9 10u 250V
Rg26 4M7
Rg27 10k
Cg6 100n
Cg7 4u7 250V
Lg1 10uH
Dg2 BYV36C
Cg11 8n2 1500V
Cg12 470n
rg28 22k
200V
Z-CRT
EHT 27kV
U Focus
U g2
n.25kV
n.7.5kV
n.700V
** VALUE, SEE TABLE ON THE RIGHT
Mz2 473175
Rz5 **
Rz2 **
Cz1 100n
Cz2 4u7 250V
Cz3 2n2
Dz1 BYV26C
Cz4 330p
Rz4 1R5
Cz5 330n
Rz20 27k
Rz10 4k7
Rz15 15k
27V
Dz2 BYV36C
Cz6 2200u 35V
Cz20 6n8
Rz7 0R1 0.4W
Dz4 1N4007
Dz7 1N4007
Rz8 15
Rz9 15
Dz3 BYV36C
Rz16 3R3
Rz17 3R3
Rz18 3R3
Rz19 3R3
Rz21 3R3
Rz22 3R3
Tz3 BU508AF
Rz11 1k8
Cz8 220n
Cz7 100u 35V
Dz8 1N4148
Rz12 1k
Tz1 BC547B
Cz9 56p
Rz13 1k
Rz14 220
Tz2 BC637
Mz1 83610
Cz11 330p
Rz23 27
Rz25 27k
Rz6 220k
Cz10 150p 400V
Cz12 220n
Cz13 470n
Cz15 ** 1600V
Dz11 BYR29F
Cz14 ** 630V
Dz12 BY228
Cz16 ** 1600V
Lz1 FJ1368
Rz26 330
Rz27 1k
Tz4 BUX84F
Dz13 BYV36C
Dz14 BYV36C
Dz10 BYV36C
Rz30 10k
Cz17 150n
Cz22 4u7 250V
Lz2 FJ1375
Cz18 **
Lz3 **
Rz28 1k 1W
Rz29 10k
Rz31 10k
Rz32 3k9
Rz33 1k2
Tz6 BC558B
Tz7 BC557B
Rz34 470
Cz19 2n2
Tz8 2SD2012
Rz36 12k
ZDY
Cz21 220n
Raster correction
27V
70V
PC DRIVE
17V
H DRIVE
H FLYBACK
BCL
138V
70V
Ru1 8k2
Ru2 8k2
28V
Cu4 470u 40V
Cu6 100n
Cu7 330p
Du2 BYW98-200
17V
Cu8 470u 40V
Cu9 100n
Cu11 330p
Du3 BYW98-200
Su1 T4A
7V
Cu12 1000u 16V
Cu13 100n
Cu14 330p
Du4 BYS27-45
Su2 T4A
Ru6 62
Ru7 12
ZDu1 BZX85C13
Cu16 47u 16V
Cu1 330p 1600V
Ru3 220 4W
Lu3 3uH
Mu1
Du1 BY500
Cu3 100n
138V
137.3V
Cu17 47u 250V
Lu1 FJ1311
Cu18 470n
Ru5 1R
Ru54 0R1 0.4W
ICu2 TDA4605
MAINS NON ISOLATED
Lu4 3uH
Lu2 4uH7
Du7 BYV36C
Du8 1N4148
BUZ91
Tu1
Ru8 33k 9W
Cu21 33n 1000V
Cu22 220p 1600V
Lu5 3uH
Ru9 4k7
Ru12 15
Cu23 47u 16V
REFERENCE VOLTAGE TYP. 3V
SUPPLY VOLTAGE MONITOR
OUTPUT
PRIMARY CURRENT REPROD.
LOGIC
LOW VOLTAGE PROTECTION
ZERO TRANSIT DET.
COMPARATOR
STARTING IMPULSE GEN.
REG. OVERLOAD
OVERLOAD POINT CORRECTION
Cu31 1u 63V
Ru21 4k32
Ru22 374k
Ru23 374k
Ru24 150k
Ru26 150k
Cu32 6n8
Ru27 12k
Ru28 12k
Ru29 12k
Ru31 12k
R13 47 2W
Ru14 10k
Du11 1N4148
Cu27 100n
Ru16 10k
Ru18 24k
Ru17 3k3
Cu29 100p
Ru19 220
Cu24 5n6 160V
Cu26 1u 63V
Cu28 100n
Su3 F1.6A
313V
Cu33 10n
Ru32 180k
Ru33 180k
Cu34 220u 385V
Cu36 3n3
Cu37 3n3 1kV
Du12
Du13
Du14
Du15
4xBY527
Cu38 3n3 1kV
Cu39 3n3 1kV
Ru36 1R5 4W
Ru35 1R5 4W
U-DEM
Cu44 220n
PTCu1
2322 662 96116
DEGAUSSING COILS
ICu1 CNW82
Ru34 10M
Cu41 1n5 400V~
Cu42 2n7 400V~
Cu43 2n7 400V~
U-MS
EXTERNAL MODULE WITH SMPS
Lms2 100n 250V~
Cms1 100n 250V~
B82724-A2142-N1
Lms1
Rms1 2k2
Rms2 2k2
Lms3 56u
MAINS NON ISOLATED
MS
Sms1 T2A
MSFC
START1
START2
Ru37 150
Ru38 150
12.3V
13.4V
Ru39 100k
Pu2 470
Ru41 1k47
Ru42 100k
Du16 1N4148
ICu3 TL431
Ru43 8k25
Tu2 BC547B
Ru44 10k
Ru46 1k5
Ru47 100k
Du17 1N4148
ICu4 TL431
Ru48 750
Tu3 BC547B
Ru53 10k
Ru49 10k
Ru52 1k5
Tu4 BC547B
Ru51 1k
10.0/0V stby +PA
OFF

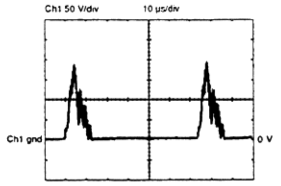
** VARIABLE COMPONENTS FOR CRT TYPES

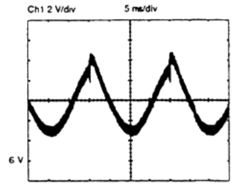
AB	CRT	Cz14	Cz15	Cz16	Cz18	Lz3	Rz2	Rz5	Z-DY
5*2	Philips BL	6n2	1n5	10n	390n	Ajd	5R6	27R	1-2
5*5	Philips FST								
5*0	Toshiba 24"28"	5n6	1n	10n	390n	Fix	5R6	47R	1-3
5*3	Toshiba 21"								
5*1	Videoc MP	6n8	1n	10n	390n	Fix	1R0	10R	1-3
5*4	Videoc SP								

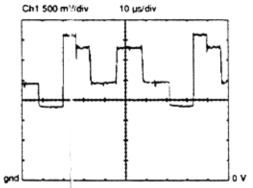

TP51 H

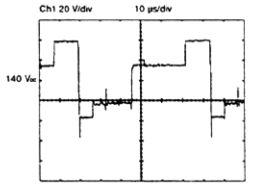

TP54 H

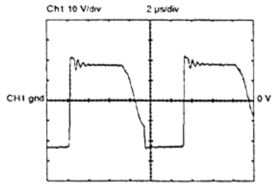

TP58 H

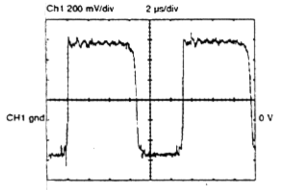

TP62 H

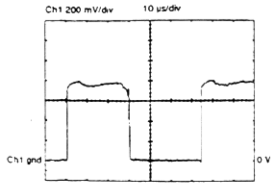

TP66

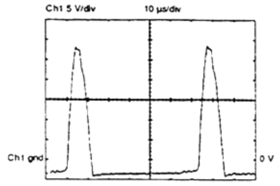

TP69

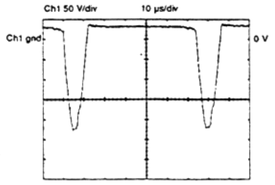

TP73

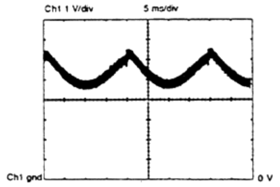

TP77

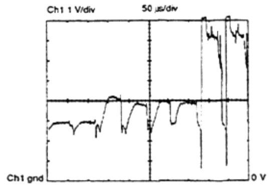

TP81

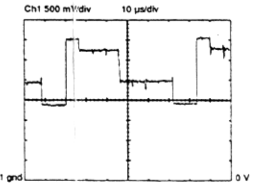

TP52 H

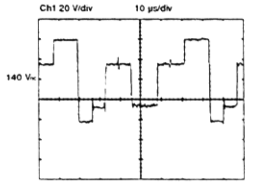

TP56 H

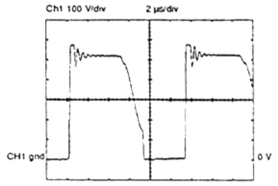

TP59 H

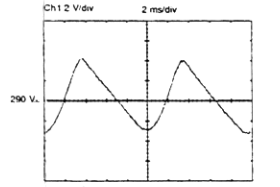

TP63 V

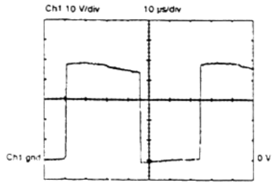

TP67

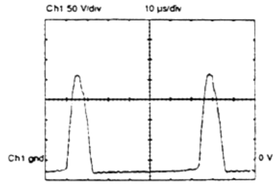

TP71

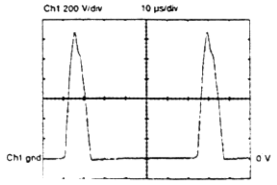

TP74

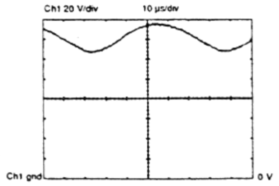

TP78

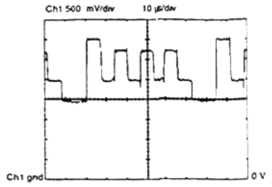

TP82

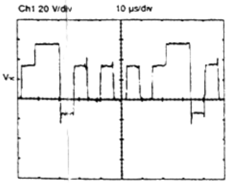

TP53 H

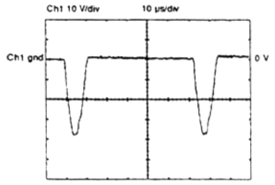

TP57 H

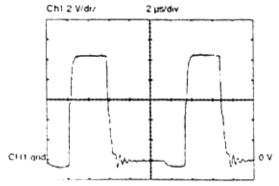

TP61 H

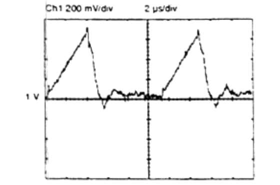

TP64 H


TP68


TP72

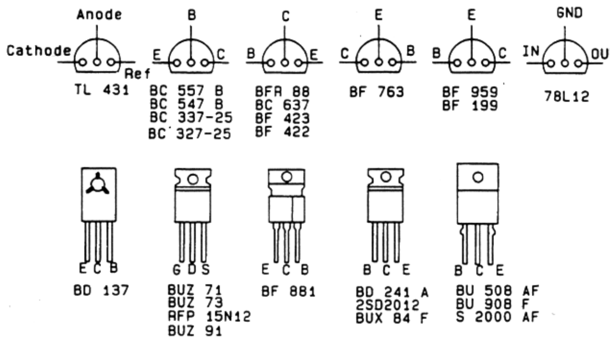

TP76

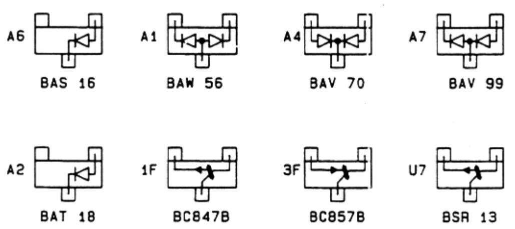

TP79

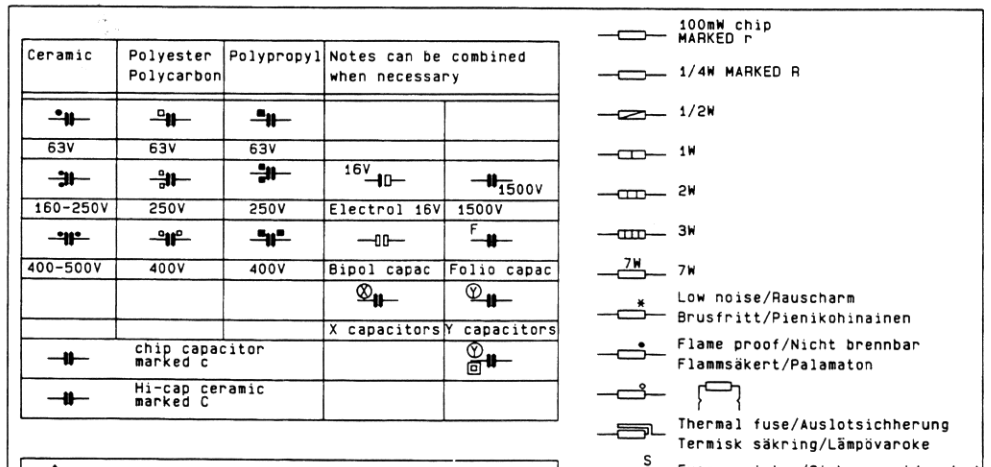

TP83

R = RED COLOUR SIGNAL
G = GREEN COLOUR SIGNAL
B = BLUE COLOUR SIGNAL
FB = FAST BLANKING SIGNAL
CVBS = VIDEO SIGNAL
STA = STATUS SIGNAL FROM SCART
L in = LEFT AUDIO SIGNAL FROM SCART
R in = RIGHT AUDIO SIGNAL FROM SCART
L out = LEFT AUDIO SIGNAL TO SCART
R out = RIGHT AUDIO SIGNAL TO SCART
SAT CVBS = VIDEO SIGNAL FROM SATELLITE UNIT
TX INS = TEXT INSERTION CONTROL
Y = LUMINANCE SIGNAL FROM SVHS
C = COLOUR SIGNAL FROM SUHS
BC = BLACK CURRENT
F = FILAMENT VOLTAGE FOR CRT

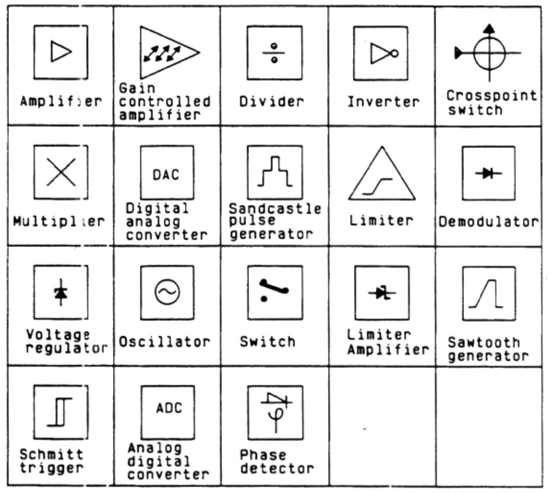
SDA = SERIAL DATA (I^{2}C BUS)
SCL = SERIAL CLOCK (I^{2}C BUS)
BCL = BEAM CURRENT LIMITING VOLTAGE
SIF = SOUND IF
OSD = ON SCREEN DISPLAY
12Vp = +12V SUPPLY TO PICTURE CIRCUITS
12Vs = +12V SUPPLY TO SOUND AND IF CIRCUITS
5Vs = +5V SUPPLY TO SOUND AND IF CIRCUITS
5Vstby = +5V STAND-BY SUPPLY TO uP AND IR RECEIVER
EVEN = DEINTERLACING SIGNAL FROM TXT
OFF = POWER SUPPLY REGULATION MODE
START = MAINS SWITCH START CONTACT
SYNC = SYNCRONISATION SIGNAL
RGB-STA = STATUS FROM FIXED RGB SIGNAL
SSC = SUPER SANDCASTLE SIGNAL

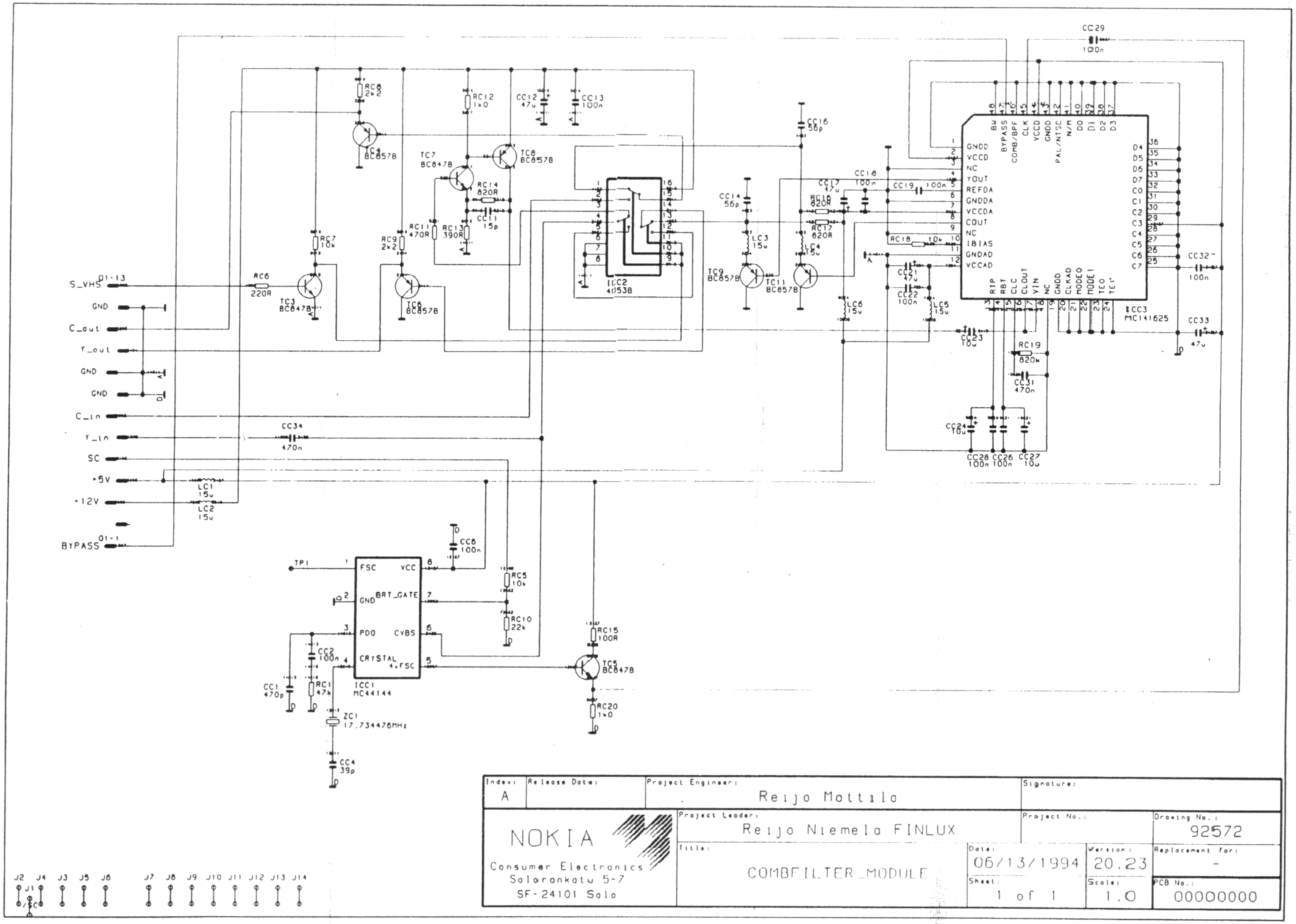

Anode
Cathode
Ref
TL 431
B
E
C
BC 557 B
BC 547 B
BC 337-25
BC 327-25
C
B
E
BFR 88
BC 637
BF 423
BF 422
E
C
B
BF 763
E
B
C
BF 959
BF 199
GND
IN
OUT
78L12
E C B
BD 137
G D S
BUZ 71
BUZ 73
RFP 15N12
BUZ 91
E C B
BF 881
B C E
BD 241 A
2SD2012
BUX 84 F
B C E
BU 508 AF
BU 908 F
S 2000 AF


A6
BAS 16
A1
BAW 56
A4
BAV 70
A7
BAV 99
A2
BAT 18
1F
BC847B
3F
BC857B
U7
BSR 13


Ceramic
Polyester
Polycarbon
Polypropyl
Notes can be combined when necessary
63V
63V
63V
16V
1500V
160-250V
250V
250V
Electrol 16V
1500V
F
400-500V
400V
400V
Bipol capac
Folio capac
X capacitors
Y capacitors
chip capacitor marked c
Hi-cap ceramic marked C
100mW chip MARKED r
1/4W MARKED R
1/2W
1W
2W
3W
7W
7W
*
Low noise/Rauscharm
Brusfritt/Pienikohinainen
Flame proof/Nicht brennbar
Flammsäkert/Palamaton
Thermal fuse/Auslotsichherung
Termisk säkring/Lämpövaroke
S
Fuse resistor/Sicherungwiderstad
Säkringsmotstånd/Sulakevastus

⚠ Critical safety component. Use identical component for replacement.


Amplifier
Gain controlled amplifier
Divider
Inverter
Crosspoint switch
Multiplier
DAC
Digital analog converter
Sandcastle pulse generator
Limiter
Demodulator
Voltage regulator
Oscillator
Switch
Limiter Amplifier
Sawtooth generator
Schmitt trigger
ADC
Analog digital converter
Phase detector


CC29
100n
RC8
2k2
TC4
BC857B
RC12
1k0
CC12
47u
CC13
100n
TC7
BC847B
TC8
BC857B
RC14
820R
CC11
15p
RC11
470R
RC13
390R
RC7
10k
RC9
2k2
RC6
220R
TC3
BC847B
TC6
BC857B
ICC2
4053B
CC16
56p
CC14
56p
LC3
15u
LC4
15u
TC9
BC857B
TC11
BC857B
CC17
47u
CC18
100n
CC19
100n
RC16
820R
RC17
820R
RC18
10k
LC6
15u
LC5
15u
CC21
47u
CC22
100n
CC23
10u
RC19
820k
CC31
470n
CC24
10u
CC28
100n
CC26
100n
CC27
10u
CC32
100n
CC33
47u
ICC3
MC141625
GNDD
VCCD
NC
YOUT
REFDA
GNDDA
VCCDA
COUT
NC
IBIAS
GNDAD
VCCAD
BW
BYPASS
COMB/BPF
CLK
VCCD
GNDD
PAL/NTSC
N/M
D0
D1
D2
D3
D4
D5
D6
D7
C0
C1
C2
C3
C4
C5
C6
C7
RTP
RBT
CLC
CLOUT
VIN
NC
GNDD
CLKAD
MODE0
MODE1
TEO
TE1
S_VHS
01-13
GND
C_out
Y_out
GND
GND
C_in
Y_in
CC34
470n
SC
+5V
+12V
LC1
15u
LC2
15u
BYPASS
01-1
CC6
100n
TP1
FSC
VCC
GND
BRT_GATE
PDO
CVBS
CRYSTAL
4xFSC
ICC1
MC44144
RC5
10k
RC10
22k
CC2
100n
CC1
470p
RC1
47k
ZC1
17.734476MHz
CC4
39p
RC15
100R
TC5
BC847B
RC20
1k0
J2
J1
J4
J3
J5
J6
J7
J8
J9
J10
J11
J12
J13
J14

Index:	Release Date:	Project Engineer:	Signature:
A		Reijo Mattila	

NOKIA

Consumer Electronics
Salorankatu 5-7
SF-24101 Salo

Project Leader: Reijo Niemela FINLUX

Project No.:

Drawing No.: 92572

Title: COMBFILTER_MODULE

Date: 06/13/1994

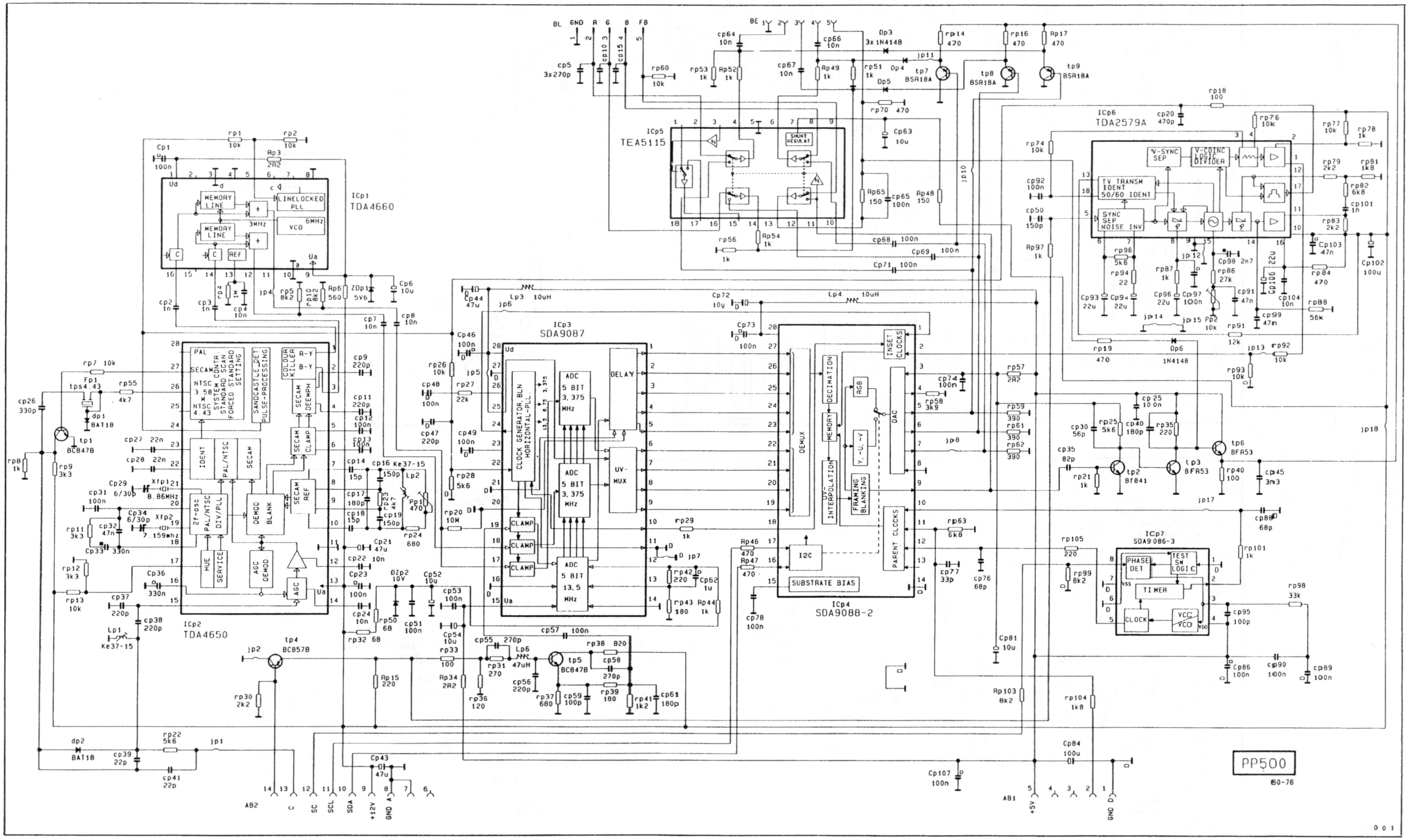
Version: 20.23

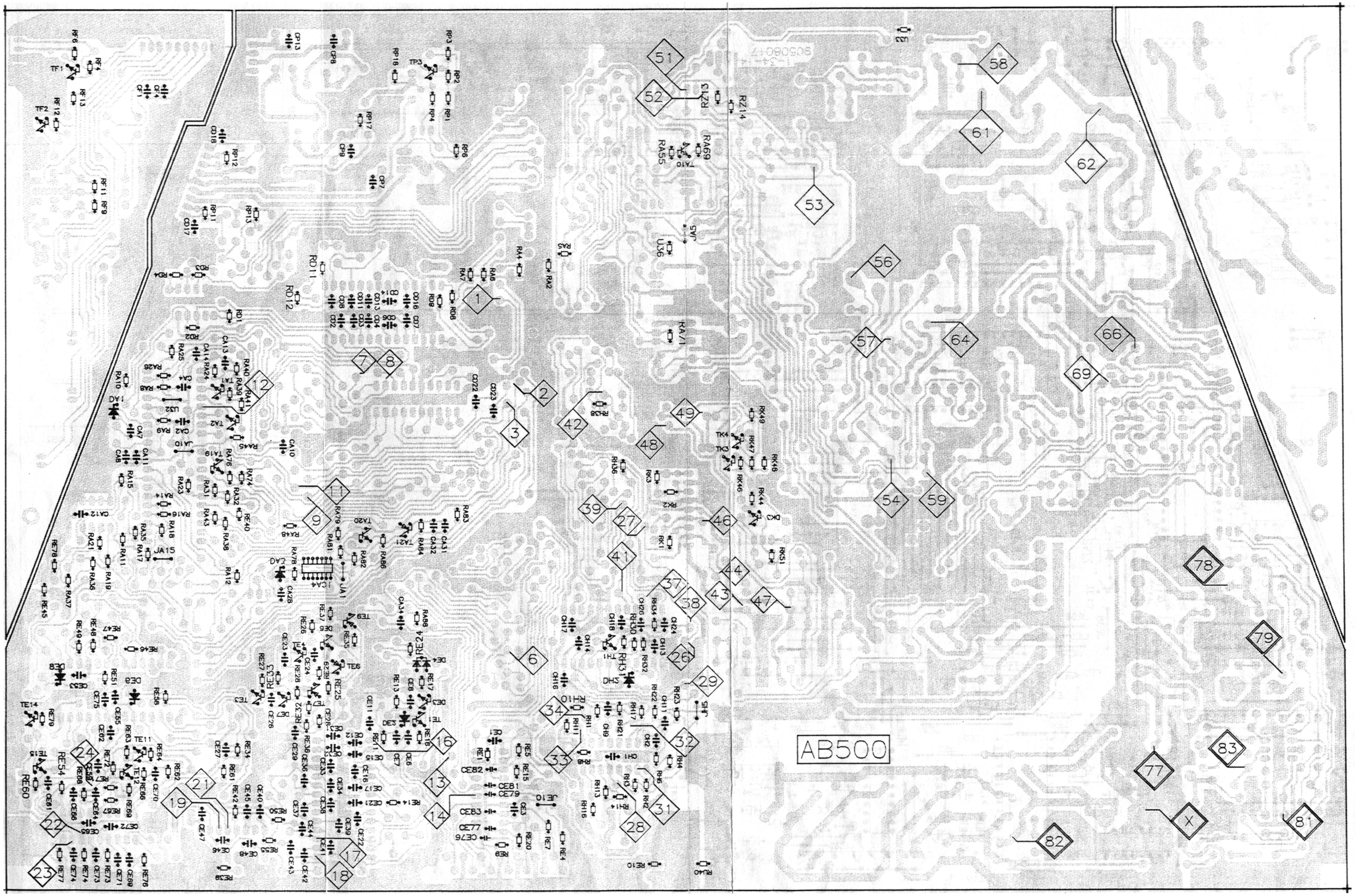
Replacement for: -

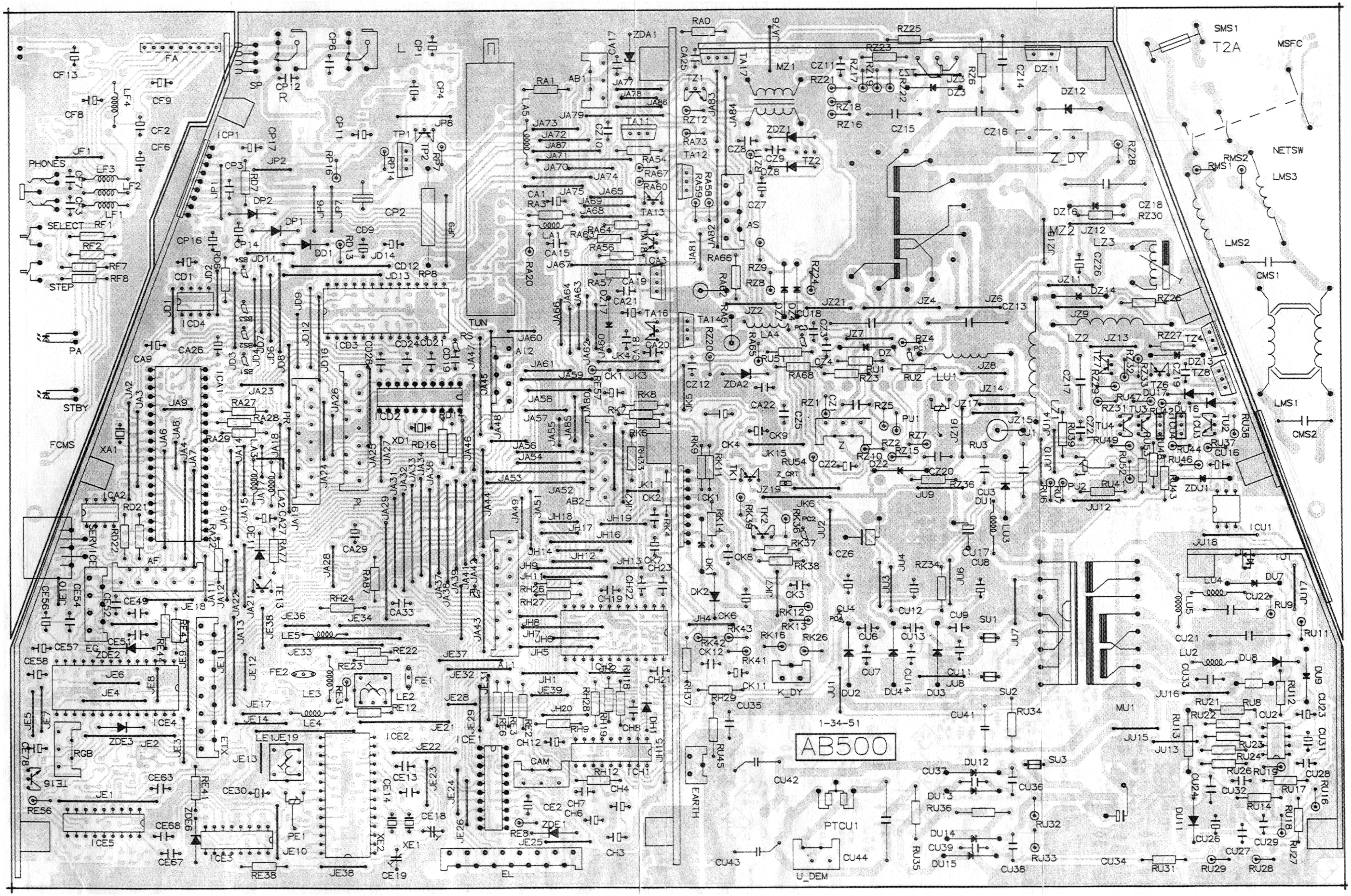
Sheet: 1 of 1

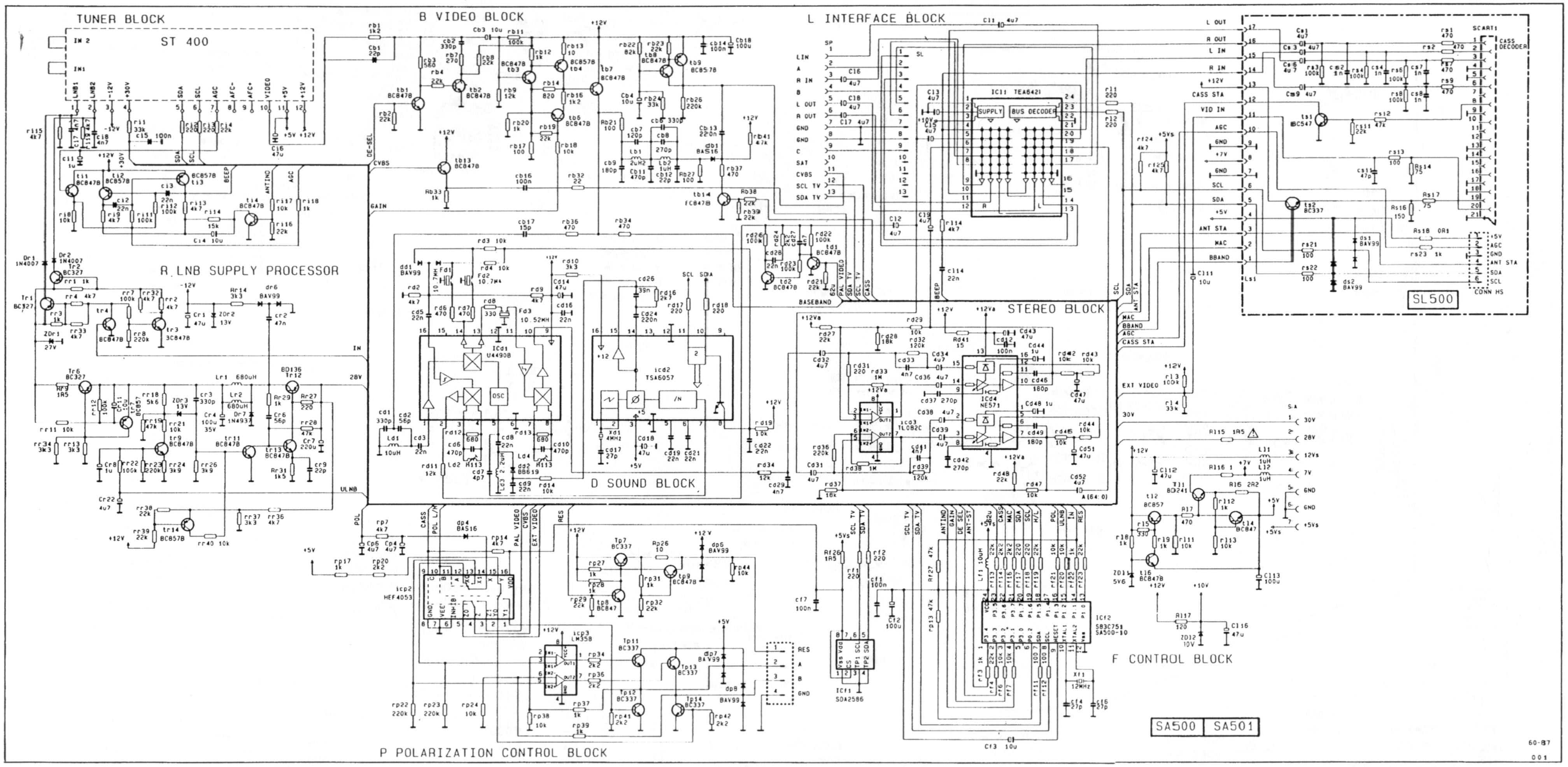
Scale: 1.0

PCB No.: 00000000


ICp1
TDA4660
MEMORY LINE
MEMORY LINE
LINELOCKED PLL
VCO
6MHz
3MHz
REF
ICp2
TDA4650
PAL
SECAM
NTSC 3.58
NTSC 4.43
SYSTEM CONTR STANDARD SCAN FORCED STANDARD SETTING
SANDCASTLE DET PULSE-PROCESSING
COLOUR KILLER
R-Y
B-Y
SECAM DEEMPH
SECAM CLAMP
SECAM REF
IDENT
PAL/NTSC
SECAM
2f-osc PAL/NTSC DIV/PLL
DEMOD BLANK
HUE
SERVICE
AGC DEMOD
AGC
ICp3
SDA9087
CLOCK GENERATOR, BLN HORIZONTAL-PLL
ADC 5 BIT 3,375 MHz
ADC 5 BIT 3,375 MHz
ADC 5 BIT 13,5 MHz
CLAMP
CLAMP
CLAMP
DELAY
UV-MUX
ICp4
SDA9088-2
DEMUX
DECIMATION
MEMORY
INTERPOLATION
RGB
Y, -U, -V
DAC
FRAMING BLANKING
INSET CLOCKS
PARENT CLOCKS
I2C
SUBSTRATE BIAS
ICp5
TEA5115
SHUNT REGULAT
ICp6
TDA2579A
V-SYNC SEP
V-COINC LOGIC DIVIDER
TV TRANSM IDENT 50/60 IDENT
SYNC SEP NOISE INV
ICp7
SDA9086-3
PHASE DET
TEST SW LOGIC
TIMER
CLOCK
VCC VCO
BL GND R G B FB
BE 1 2 3 4 5
tp1 BC847B
tp2 BF841
tp3 BFR53
tp4 BC857B
tp5 BC847B
tp6 BFR53
tp7 BSR18A
tp8 BSR18A
tp9 BSR18A
Dp3 3x 1N4148
Dp6 1N4148
dp1 BAT18
dp2 BAT18
ZDp1 5V6
DZp2 10V
Xfp1 8.86MHz
Xfp2 7.159mhz
Lp1 Ke37-15
Lp2 Ke37-15
Lp3 10uH
Lp4 10uH
Lp6 47uH
AB2
14 13 12 11 10 9 8 7 6
C SC SCL SDA +12V GND A
AB1
5 4 3 2 1
+5V GND D
PP500
60-76
0 0 1


AB500
X
RZ13
RZ14
RA55
RA69
RD11
RD12
RE24
RE25
RE32
RE33
RE54
RE60
RH10
RH31


AB500
1-34-51
PHONES
SELECT
STEP
PA
STBY
FCMS
SERVICE
FA
SP
L
R
TUN
CAM
EL
RGB
EARTH
K_DY
Z_DY
U_DEM
PTCU1
MU1
SMS1
T2A
MSFC
NETSW
RMS1
RMS2
LMS1
LMS2
LMS3
CMS1
CMS2
MZ1
MZ2
ICP1
ICD1
ICD2
ICD3
ICD4
ICA1
ICE1
ICE2
ICE3
ICE4
ICE5
ICH1
ICH2
ICK1
ICU1
AF
AS
EG


TUNER BLOCK
ST 400
B VIDEO BLOCK
L INTERFACE BLOCK
R LNB SUPPLY PROCESSOR
D SOUND BLOCK
STEREO BLOCK
P POLARIZATION CONTROL BLOCK
F CONTROL BLOCK
ICd1 U4490B
icd2 TSA6057
IC11 TEA6421
SUPPLY
BUS DECODER
ICd4 NE571
icd3 TL082C
icp2 HEF4053
icp3 LM358
ICf1 SDA2586
ICf2 S83C751 SA500-10
SCART1
CASS DECODER
CONN HS
SL500
SA500
SA501
L OUT
R OUT
L IN
R IN
CASS STA
VID IN
AGC
GND
SCL
SDA
ANT STA
MAC
BBAND
BASEBAND
EXT VIDEO
CVBS
DE-SEL
GAIN
BEEP
ANTIND
ULNB
POL
CASS
POL L/M
PAL VIDEO
RES
30V
28V
12Vs
7V
+5Vs
60-87
001